Challenges micro-enterprises experience in accessing support information using e-Government websites: Case of the Western Cape

A dissertation submitted to the

Department of Information Systems
Faculty of Commerce
University of Cape Town

In partial fulfilment of the requirements for the degree
Master of Commerce in Information Systems

By Muhammad Ameer Osman
21 January 2018

Supervisor: Professor Wallace Chigona

Plagiarism Declaration

1. This dissertation has been submitted to the Turnitin module (or equivalent similarity and originality checking software) and I confirm that my supervisor has seen my report and any concerns revealed by such have been resolved with my supervisor.
2. I certify that I have received Ethics approval (if applicable) from the Commerce Ethics Committee.
3. This work has not been previously submitted in whole, or in part, for the award of any degree in this or any other university. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works of other people has been attributed and has been cited and referenced.

Student number	OSMMUH013
Student name	Muhammad Ameer Osman
Signature of Student	Signed by candidate
Date:	21 January 2018

Table of Contents

List of Figures

List of Tables

List of Acronyms

ADSL	Asymmetric Digital Subscriber Line
CA	Capability Approach
E-Government	Electronic Government
G2B	Government-to-Business
G2C	Government-to-Citizen
GDP	Gross Domestic Product
ICT	Information and Communication Technology
ICTs	Information and Communication Technologies
IT	Information Technology
NGOs	Non-Governmental Organisations
SME	Small Medium Enterprises
SMME	Small Medium and Micro-sized Enterprises
Wi-Fi	Wireless Fidelity

Acknowledgements

It is with great pleasure that I thank all those who have helped and supported me in making this dissertation possible.

I cannot fully express – through words – my love and gratitude to my creator, Allah (subḥānahu wa ta'āla) for sustaining me through this dissertation. His mercy and grace have been sufficient for me and He has been my help - a true omnipresent help in times of need. "*Verily, after difficulty comes ease*" [94:5].

I would like to express my sincere gratitude to my parents, Shahida and Hassan Osman. Thank you for your support and guidance throughout this challenging and tedious journey. I would also like to thank my late grandmother, Amina Jacobs who played a pivotal role in my childhood development.

Thank you to my supervisor and mentor, Professor Wallace Chigona. Your guidance, support, patience and encouragement have contributed to shaping this work. God bless you Prof. Thank you to Professor Michael Kyobe for inspiring and constantly motivating me. Lastly, thank you to Dr Frank Makoza for your valuable advice and support.

Muhammad Ameer Osman

21 January 2018

Dedication

I dedicate this work to all micro-enterprises that strive for sustainable growth and aim to access improved information and transformative economic opportunities.

Abstract

Background: Governments often provide support to Small, Medium and Micro-sized Enterprises (SMMEs) to ensure that they are sustainable. Micro-enterprises play an important role in the economic and socio-economic development of developing countries. However, the majority of micro-enterprises find it challenging to survive or to grow due to numerous challenges they experience. Information and Communication Technologies (ICTs) could assist micro-enterprises to grow and be competitive. E-Government has been internationally advocated to improve the delivery of government information. However, African governments are experiencing challenges that limit the success of e-Government. This has resulted in limited accessibility.

Purpose of the research: The objective of the study is to investigate the challenges that micro-enterprises experience in accessing support information using e-Government websites in a developing country context. To achieve that the study describes the challenges experienced, analyses the types of support information accessed and identifies the Information and Communication Technology devices used to access support information.

Design/methodology/approach: This multidisciplinary study adopted a constructivist approach and used an interpretive paradigm. The study was guided by Sen's Capability Approach as a theoretical framework, and thematically analysed patterns between context, capabilities and outcomes. Data for the study was collected using semi-structured interviews. Furthermore, annual reports, published statistics and additional documents were also used as secondary data. Purposive and snowballing sampling were used to target established micro-enterprises in the Western Cape, South Africa.

Findings: Micro-enterprises gained several benefits of using ICT for general business activities. These included improved access to information, improved communication, improved marketing, reduced costs and improved efficiency and productivity. Micro-enterprises also experienced several challenges with accessing support information using e-Government websites. These included content, structure, design, language availability and red tape. Support information relating to business skills development, products and services development and funding were mostly accessed. Furthermore, micro-enterprises mostly used laptops and mobile phones to access support information.

Practical implications: The findings indicate that if micro-enterprises could access support information using e-Government websites, it could have a positive impact on their businesses such as improved competitiveness. Finally, the study uncovered that access to support information could also have a positive impact on the personal agency of micro-enterprises i.e. personal objectives such as women empowerment.

Originality/contribution: The study contributes to the gap in research in terms of investigating the phenomenon of e-Government accessibility in developing countries. The study also contributes new understanding by separating the ICT and e-Government into two commodities to identify and show where the accessibility problem emanates from. Furthermore, the study proposes a conceptual model that provides an opportunity for researchers to understand users such as micro-enterprises of Government-to-Business projects so that suitable recommendation on the next course of actions be proposed to relevant stakeholders of future Government-to-Business projects.

1. Introduction

This chapter presents the background, research problem and purpose of the study, followed by the research objectives and questions. The research gaps identified in literature and overview of chapters are also presented in this chapter.

1.1 Background of the study

Micro-enterprises contribute significantly toward the socio-economic development of numerous developing countries (Osotimehin et al., 2012). The role of micro-enterprises in an economy usually includes income generation, a source of employment and self-empowerment (Makoza & Chigona, 2014). Micro-enterprises are particularly important because they have the capacity to assist the most vulnerable members of a society by improving social conditions (Makoza & Chigona, 2012). However, the majority of micro-enterprises find it challenging to survive or to grow due to numerous challenges they experience such as access to information, securing capital, limited business skills, identifying markets and understanding the regulatory requirements for a business (Osotimehin et al., 2012). These challenges usually lead to micro-enterprises not surviving beyond the first two years (Makoza & Chigona, 2014). Information and Communication Technologies could assist micro-enterprises to improve their chances of survival, grow and continue to be competitive (Qureshi et al., 2008).

Governments internationally are using ICTs to improve the delivery of public services, include stakeholders in decision-making processes, decrease administrative expenses and eliminate bureaucracy such as red tape (Bal, Biricik & Sari, 2015). E-Government has been internationally advocated to improve the delivery of government information and efficiency, while at the same time improving accountability, clarity, responsiveness and placing governments closer to its citizens (Zhao & Collier, 2014). However, African governments are experiencing challenges that limit the success of e-Government such as insufficient expertise, resources, implementation plans and infrastructure (Makoza & Chigona, 2013). Additional challenges include socio-economic conditions, lack of appropriate content, language barriers and literacy levels (Grönlund, 2011). These challenges have resulted in an inability to implement e-Government and citizens are unable to use e-Government services (Lin et al., 2011). Consequently, many e-Government projects result in failure, however, African governments continue to invest in e-Government projects to provide public services online (Bwalya & Healy, 2010). This has resulted in challenges of accessibility; and has created a need for research into the phenomenon of e-Government

accessibility in developing countries, specifically Africa (Agangiba & Kabanda, 2016; Odat, 2012).

1.2 Research Problem

The Western Cape Government and other development agencies such as the Small Enterprise Development Agency of South Africa provide support information to businesses such as micro-enterprises with the aim of enabling them to survive and be competitive (Bureau for Economic Research, 2016a). The support information often includes access to finance, capital financing, business formalisation, business skills development, products and services development and access to resources and infrastructure such as ICT and information (Western Cape Government, 2018a). However, despite the myriad of support information available in most cases, the use of the support information has not been optimal, especially by micro-enterprises.

The Western Cape Government plans to achieve level four of e-Government maturity which is ideal for the requirements of citizens, businesses and other stakeholders' and actively involves them in government activities and decision-making processes (e-Government Strategy, 2012). Currently, the Western Cape Government is at the first level of e-Government maturity in which only a few services are offered and usually the web content is static (Western Cape Government, 2017d). Over the last half-decade, various services of the Western Cape Government has been digitised resulting in numerous disparate websites being developed (e-Government Strategy, 2012). Consequently, this challenge has led to the support information being siloed and segmented across various levels (provincial and local) and departments of the Western Cape Government (Western Cape Government, 2018a). This has resulted in challenges of accessibility occurring, limiting businesses such as micro-enterprises from accessing support information. Therefore, the objective of the study was to investigate the challenges that micro-enterprises experience in accessing support information using e-Government websites.

1.3 Research Purpose

Micro-enterprises play an important role in the economic and socio-economic development of most developing countries (Osotimehin et al., 2012). In South Africa, 23% of employment is provided by small and informal enterprises; for the Western Cape, it is 10% (Statistics South Africa, 2016a; Wesgro, 2012). Micro-enterprises make a significant contribution toward the social-economic development of South Africa – through job creation, acting as

a source of household income and through promoting innovation and skills development (Makoza & Chigona, 2014). However, the majority of micro-enterprises find it challenging to survive or to grow due to numerous challenges they experience (Osotimehin et al., 2012). Therefore, the purpose of the study was to describe the challenges that micro-enterprises experience in accessing support information using e-Government websites to improve their growth and competitiveness. Furthermore, the study proposed a conceptual model that provides an opportunity for researchers to understand users such as micro-enterprises of Government-to-Business projects so that suitable recommendation on the next course of actions be proposed to relevant stakeholders of future Government-to-Business projects.

1.4 Research Objectives

The objective of the study was to investigate the challenges that micro-enterprises experience in accessing support information using e-Government websites. Information and Communication Technology such as e-Government may assist micro-enterprises to be competitive and that there are potential positive outcomes of using ICT in business activities of micro-enterprises (Kamal & Qureshi, 2009). Based on the context of the developing country, namely South Africa, the following research objectives were proposed for the study:

- Describe the challenges that micro-enterprises experience in accessing support information using e-Government websites.

The secondary objectives of the study are:

- Analyse the types of support information that micro-enterprises access using e-Government websites.
- Identify the ICT devices that micro-enterprises use to access support information using e-Government websites.

1.5 Research Questions

The study is guided by the research question:

- What challenges do micro-enterprises experience in accessing support information using e-Government websites?

The question is further divided into secondary questions:

- What types of support information do micro-enterprises access using e-Government websites?
- Which ICT devices do micro-enterprises use to access support information using e-Government websites?

1.6 Research Approach

The study adopted a constructivist approach and used an interpretive paradigm. The study was guided by Sen's Capability Approach as a theoretical framework, and thematically analysed patterns between context, capabilities and outcomes. Data for the study was collected using semi-structured interviews during February and March 2017. The study also used annual reports, published statistics and additional documents as secondary data. Purposive and snowballing sampling were used to target a heterogeneous sample of 17 established micro-enterprises in the Western Cape.

1.7 Identified gaps in literature

The following were gaps identified in the literature as the challenges that micro-enterprises experience in accessing support information using e-Government websites in a developing country context. The study only highlights gaps that were relevant to the research:

i. *Information Systems research on micro-enterprises:* Micro-enterprises play an important role in the economic and socio-economic development of most developing countries (Osotimehin et al., 2012). However, micro-enterprises have received marginal attention in Information Systems research (Qureshi, 2016). Consequently, there is limited knowledge and understanding of the challenges these enterprises experience in their use of ICT (Mpofu et al., 2013; Ongori & Migiro, 2010; Ponelis, 2014; Steyn et al., 2014).
ii. *Generalisation of Information Systems theories for studies of micro-enterprises:* Most studies pertaining to Information Systems research have focused on Small and Medium Enterprises (SMEs) in general – micro-enterprises are classified as a subcategory within SMEs (Donner & Escobari, 2010; Kamal & Jackson, 2014; Mbuyisa & Leonard, 2017). Consequently, it creates a challenge to generalise about Information Systems theories and frameworks to use for micro-enterprises (Lee & Baskerville, 2003). Conventional models of technology acceptance do not

sufficiently explain technology adoption for micro-enterprises (Good & Qureshi, 2009).

iii. *Accessibility of e-Government in developing countries:* Majority of studies involving accessibility of e-Government services have focused on developed countries; developing countries, specifically Africa receiving marginal attention (Agangiba & Kabanda, 2016; Odat, 2012). This has resulted in limited research regarding the accessibility of e-Government services in developing countries (Odat, 2012). Prior research has analysed topics such as factors for the adoption of e-Government, implementation of e-Government and involvement of e-Government among others (Bwalya et al., 2013; Bwalya & Healy, 2010; Dwivedi et al., 2012; Grönlund, 2011). Consequently, the challenges of accessibility of e-Government services in developing countries are still not clear (Makoza & Chigona, 2013).

iv. *Qualitative research strategy:* Majority of studies focusing on developing countries have used a quantitative research strategy to assess both micro-enterprises and e-Government. Tanle and Abane (2017) highlight that the literature lacks qualitative research that assesses how entrepreneurs such as micro-enterprises interact with new methods (e.g. Government-to-Business) which are available for obtaining information and communicating. Therefore, the need to use a qualitative strategy to investigate the research problem and add newness to the research area.

1.8 Overview of chapters

This section outlines the remaining chapters of the dissertation. A brief explanation of contents of each chapter is elaborated in relation to the way the study was designed and executed.

Chapter 2 explores the literature in an attempt to address questions related to the research topic and related challenges. The literature review also looks at the context of micro-enterprises in developing countries and their use of ICT. The review addresses challenges faced by micro-enterprises and interventions that are aimed at supporting and enabling them to be competitive. E-Government and various aspects surrounding the concept such as accessibility are also discussed in the review.

Chapter 3 looks at the theoretical background of the study focusing on the Capability Approach that underpinned the research. The justification for the selection of the theoretical framework is also discussed.

Chapter 4 describes the research methodology and rationale for selection of the research method. The research instrument, data collection methods, sampling method and the justification for using them are fully described. The data analysis method employed in the study, followed by ethical considerations and timeframe are presented in this chapter.

Chapter 5 summarises the key findings and attempts to answer the research question and address the research objectives. The key themes that have emerged from the data analysis are summarised and new concepts are noted.

Chapter 6 discusses and summarises the answers obtained in the study for the research question and objectives and the extent to which the results have achieved the theoretical and methodical aims. The chapter also discusses the limitations and value of the study. A conceptual model for future research is presented in this chapter. Recommendations for practice and direction for further research are also presented.

2. Literature Review

This chapter presents a critical review of the literature addressing questions related to the research topic and related challenges. The review summarises the context of micro-enterprises in developing countries and their use of ICT. The review also addresses challenges faced by micro-enterprises and interventions that are aimed at supporting and enabling them to be competitive. E-Government and various aspects surrounding the concept such as accessibility are also discussed in the review. The Western Cape Province served as the focus of the study.

2.1 Micro-enterprises overview

There are various views regarding the definition of micro-enterprises, therefore, no universally agreed upon definition of these enterprises exist (Makoza, 2011). Micro-enterprises are usually described by the size or extent of their turnover and the number of their employees; these figures differ across countries (Makoza, 2011; Makoza & Chigona, 2014). Some of the definitions identified in the literature are:

> Micro-enterprises are considered as a business with five or fewer employees which act as a source of income for households in developing nations and are essential in the economic development of a developing country. (LiedHolm & Mead, 2013)

> Micro-enterprises are businesses with one to five employees and generate low revenues. (Abor & Quartey, 2010)

Micro-enterprises are usually characterised as being survivalist (i.e. in business merely as a means of economic survival), non-distinct juristic persons (i.e. having no distinction between the business and the owner's individual finances), generate low income due to the small scale of their business operations, have minimal revenue and usually operate in the informal sector of an economy (Abor & Quartey, 2010; Charman, 2016). Furthermore, these enterprises usually do not maintain business records and are often unregistered (Williams, Martinez-Perez & Kedir, 2017). Table 2.1 summarises the characteristics of SMMEs.

Table 2.1: Characteristics of SMMEs (Makoza, 2011, p. 9).

Types	Characteristics (no hard–and–fast rules)
Informal Operator/Survivalist	▪ No employees. ▪ No distinction between business and personal finances. ▪ Does not keep records. ▪ Does not pay taxes. ▪ Not registered with authorities. ▪ Engages in business activities to pay for daily expenses.
Informal Operator/ Micro or Small Business	▪ Less than 10 employees. ▪ No distinct between business and personal finances. ▪ May not keep records. ▪ May not pay taxes. ▪ Usually not registered with authorities. ▪ Has physical address and contact details.
Formal Micro or Small Business	▪ Between 10 and 49 employees. ▪ Maintains records. ▪ Has separate bank account. ▪ Pay taxes. ▪ Is registered with all required authorities. ▪ Has physical address and contact details.

Micro-enterprises play an important role in the economic and socio-economic development of most developing countries (Osotimehin et al., 2012). These enterprises act as a source of income, an opportunity for employment, enable opportunities for developing skills and self-empowerment and sustainability among others (Makoza, 2011). Micro-enterprises are also important in improving the standard of living for individuals in developing countries through socio-economic development (Abor & Quartey, 2010). These enterprises also enable opportunities for individuals to learn and develop knowledge about products and services which assist them to achieve a competitive advantage and additional income

(Qureshi et al., 2008). Micro-enterprises also offer an environment that enables individuals to be involved in economic activities at a small size which later develops into a medium to large size business (Wolcott et al., 2008). An important role of micro-enterprises is their ability to empower people through microbusiness activities such as entrepreneurship for women which contributes toward improving gender equality (Kotelnikov, 2014).

2.2 Micro-enterprises in South Africa

The South African, National Small Business Act of 2003 defines micro-enterprises as:

> "Micro-enterprises are enterprises with less than five employees, have an annual turnover of less than R0.2 million (R200 000), and an annual net asset value of less than R0.1 million (R100 000)". (National Small Business Amendment Bill, 2003)

The Act categories micro-enterprises as a sub-category of SMMEs (National Small Business Amendment Bill, 2003). Micro-enterprises are the major part of the SMMEs sector and operate across many sectors of the economy (Berry, von Blottnitz, Cassim, Kesper, Rajaratnam & van Seventer, 2002). Examples of South African micro-enterprises include spaza shops, hawkers, small manufacturers, etc. The study adopted the definition of the National Small Business Amendment Bill (2003) to define micro-enterprises because it describes the criteria for micro-enterprises based on the number of employees, turnover threshold and net asset value limit.

The South Africa Government appreciates the role of SMMEs such as micro-enterprises in economic and socio-economic development of the country (Makoza, 2011). This is highlighted in the speech by the former Minister of Finance, Pravin Gordhan in his Budget Speech of 2011:

> "Small businesses are an important source of jobs. Businesses that employ fewer than 50 workers account for 68 percent of private sector employment. We need to get our small business sector growing". (South Africa Budget Speech, 2011)

According to Swanepoel et al. (2010), SMMEs contributed 27% to 36% towards South Africa's Gross Domestic Product (GDP) and accounted for 38% of employment. Recent research indicates that this figure has increased to 42% contribution towards South Africa's GDP (Bureau for Economic Research, 2016b). Micro-enterprises also contribute positively toward providing employment creation (Kamal & Qureshi, 2009).

The influence of political and social challenges in South Africa has resulted in a vast amount of low and unskilled labour, thereby not meeting the needs of industry (Speckman, 2016). Consequently, individuals are motivated to engage in microbusiness and their enterprises serve as opportunities for self-employment due to fewer resources being required, namely capital and basic technologies for start-up (Duncombe, 2006). Other than creating opportunities for employment, micro-enterprises also enable small businesses to grow into medium-sized businesses (Chacko & Harris, 2006). Therefore, developing businesses such as micro-enterprises are important for employment creation and the economy of South Africa (Wesgro, 2012).

2.3 Challenges of micro-enterprises in South Africa

In South Africa, micro-enterprises experience numerous challenges that may affect their business operations, adoption and use of ICTs (Makoza, 2011). Challenges include access to information, awareness and knowledge of business support, identifying and accessing markets, understanding the regulatory requirements for a business, etc. (Makoza & Chigona, 2014). Consequently, micro-enterprises usually fail to develop and there is evidence regarding high rates of failure (Fatoki, 2012).

Small Business Development Minister Lindiwe Zulu "… has consistently pointed out that one of the key challenges facing these enterprises is a lack of access to finance" (Tabane, 2016, para. 7). Consequently, micro-enterprises are faced with the challenge of not being able to secure credit because of insufficient collateral which is required by most financial institutions (Makoza, 2011). Therefore, these micro-enterprises usually resort to financing for capital through savings, funds from close relatives, informal credit institutions and stokvel (Arko-Achemfuor, 2012).

Another critical challenge that many owners of micro-enterprises face is limited literacy levels which creates a deficiency of both business and managerial skills (Jere et al., 2015). Consequently, these enterprises do not develop and the income produced is not adequate to offer better salaries to their workers (Makoza & Chigona, 2012). This challenge may result in unfavourable working conditions (Jere et al., 2015).

In South Africa, SMMEs complying with regulation is challenging because of the significant cost of compliance, the absence of awareness and the deficiency of education mainly for entrepreneurs residing in rural areas (Kyobe, 2009; Liedholm & Mead, 2013).

Table 2.2 summarises additional challenges that micro-enterprises experience.

Table 2.2: Challenges of micro-enterprises.

Micro-enterprise challenge	Literature	Authors
Lack of access to finance	▪ Unable to secure credit because of insufficient collateral. ▪ Usually resort to financing using savings, funds from close relatives, informal credit institutions and stokvel.	(Arko-Achemfuor, 2012; Makoza, 2011).
Limited literacy levels	▪ Creates a deficiency of business and managerial skills. ▪ Leads to underdevelopment of micro-enterprise. ▪ Income produced is inadequate to offer better salaries to workers.	(Jere et al., 2015; Makoza & Chigona, 2012)
Complying with regulation	▪ Cost of compliance. ▪ Absence of awareness. ▪ Deficiency of education.	(Kyobe, 2009; Liedholm & Mead, 2013).

2.4 Conceptualising ICT

Information and Communication Technology is explained based on context (Qureshi et al., 2008). Table 2.3 summarises the different definitions of ICT.

Table 2.3: Definitions of ICTs (Makoza, 2011, p. 24).

ICT definition	Authors
"ICTs are technologies for capturing, processing, storage and disseminating information".	(Duncombe & Heeks, 1999).
"ICTs are technologies that connect electronic devices with communication facilities such as telephone and other networks".	(Michiels & van Crowder, 2001).
"ICTs refers to the wide range of computerised information and communication technologies. These technologies include products and services such as desktop computers, laptops, handheld devices, wired or wireless intranets, business productivity software such as text editors and spreadsheet, enterprise software, data storage and security, network security and others".	(Ashrafi & Murtaza, 2008).

Micro-enterprises usually use ICT technologies such as personal computers, laptops, mobile phones, printers, etc. (Duncombe, 2006). In terms of micro-enterprises, ICTs are considered as tools that enable the movement of information with regard to communication (Makoza, 2011).

2.5 ICT and micro-enterprises

Information and Communication Technology used to support the business operations of micro-enterprises varies in numerous ways (Duncombe & Heeks, 2005). Micro-enterprises may benefit from using ICT in the form of reduced administrative costs, improved productivity and profitability, operation efficacies and improved market share (Kamal & Qureshi, 2009). Furthermore, by using social networking, mobile phones and a website, these enterprises could reach more customers at a reduced cost, thereby using their social capital (Good & Qureshi, 2009). Another benefit derived of using ICTs is that micro-enterprises could improve decision-making for their business activities by having access to improved information that is essential for planning, organising, controlling and achieving business objectives (Mutala & van Brakel, 2006).

Information and Communication Technology could also enable micro-enterprises to conduct their business operations more effectively than using manual systems (Makoza, 2011). For example, ICT could be used for researching business information using the Internet and basic software applications such as Microsoft Excel could be used to improve the financial business records required for accessing and acquiring financial loans (Kamal & Qureshi, 2009). Furthermore, ICT use encourages economic growth and improves the achievement of sustainability (i.e. improved competitiveness) by assisting micro-enterprises to discover additional opportunities, thereby reducing poverty (Duncombe & Heeks, 2002).

2.5.1 Information needs of micro-enterprises

Information needs are a prerequisite for notions, facts, data and information for specific purposes (Makoza, 2011). Information is a fundamental requirement for business or enterprise creation, development and existence (Chew et al., 2015). Furthermore, information and knowledge are essential for decision-making purposes (Mbuyisa & Leonard, 2017). However, information must serve the requirements of the users for it to be of value and use (Olatokun, 2017).

2.5.2 Challenges of using ICT in micro-enterprises

Micro-enterprises in developing countries may experience numerous challenges when using ICTs, namely limited computer literacy skills, resistance to technology, ineffective ICT infrastructure, limited resources to develop on procurement and maintenance of ICTs and computer phobia (Jones et al., 2014). Consequently, the fear of technology causes some micro-enterprises to perceive that using ICTs would cause a negative effect on their business and therefore do not use them (Wolcott et al., 2008). The use of ICT may not be present or limited in micro-enterprises where the owners are classified as survivalist because of literacy levels (Makoza, 2011). A study conducted in a developing country identified that most micro-enterprise owners (88%) only had formative education or none at all and only 1% had completed higher education (Duncombe & Heeks, 2002). Consequently, many of these enterprises experience challenges when using ICTs to access, evaluate and apply information in their business activities (Makoza, 2011).

Micro-enterprises also experience capability challenges with using ICT (Good & Qureshi, 2009). These include insufficient skills to use ICT, limited IT skills for planning and organising, insufficient knowledge on a suitable selection of ICTs and poor IT development capability (Makoza, 2011). Furthermore, micro-enterprises are usually not fully aware of the

advantages gained of using ICTs in their business operations (Mpofu et al., 2013). However, using ICT in the business operations of micro-enterprises is important, especially for sustainability and grow (Makoza & Chigona, 2014). Acquiring and implementing ICT is not adequate to solve the ICT challenges experienced by micro-enterprises (Makoza, 2011). Implementation requires multiple factors, namely training, technology and resources to be accessible and available to micro-enterprises (Wolcott et al., 2008). Furthermore, factors such as social, economic and human factors also need to be considered for ICT solutions to be sustainable (Qureshi et al., 2008).

2.5.3 Mobile phone use in micro-enterprises

In the African continent, the use of innovative ICTs such as the Internet and mobile phones has been remarkable (Rashid & Elder, 2009). Few technologies have been broadly accepted as compared to mobile phones over a short period of time (Adeola-Omole, 2013). Regarded as the least wired continent globally, the African region currently has the highest ratio of mobile to total telephone subscribers in the world (Ndung'u & Waema, 2011). This is possibly due to mobile phones being more accessible in terms of availability and affordability and requiring minimal capabilities to use a mobile phone (van Biljon et al., 2013). Over the last decade, the African mobile market has developed by 60% on average (Kyem, 2016). This has caused an increase in the interest of the possibilities of mobile phones as a driver for development, especially in terms of assisting businesses (Aker & Mbiti, 2010).

Samuel et al. (2005, p. 5) "highlight the importance of mobiles to micro-enterprises in South Africa, Tanzania, and Egypt: roughly 60% of the micro-entrepreneurs surveyed in each country reported that the mobile had increased the profitability of the business". This concurs with Deen-Swarray et al., (2013) and Donner and Escobari (2010) that micro-enterprises mostly use mobile phones for activities such as information access and communication in relation to alternative forms of communication. This is because of the affordances of mobile phones such as immediate access to and better use of information and speed of communication (i.e. information flow) (Julsrud & Rolan, 2014). In contrast, some of the challenges of using mobile phones in micro-enterprises include trust and safety (Sathye et al., 2014). "In terms of both numbers and reach, mobile telephony is the dominant form of telephony, and micro-enterprise is the dominant form of enterprise in the majority world of developing countries" (Jagun et al., 2008, p. 60). Therefore, the majority of micro-enterprises use mobile telephony for informational purposes (Cáceres et al., 2012).

2.6 The context of the study: The Western Cape

2.6.1 Background

In South Africa, the Western Cape is the fourth major province in terms of area and population (Wesgro, 2012). Table 2.4 summarises key information about the Western Cape.

Table 2.4: Key information of the Western Cape (Provincial Strategic Plan, 2015; Statistics South Africa, 2016b).

Key facts of the Western Cape	
Population	6.2 million
Provincial capital	Cape Town
Predominant languages	Afrikaans, English and isiXhosa
National GDP contribution	13.8%
Economic growth rate	3.6% (higher than the national average)
Unemployment rate	20.5% (lowest in the country)
ICT sector	One of the fastest-growing in the country

The Western Cape Government appreciates the role that SMEs play in economic and socio-economic development (micro-enterprises are classified as a subcategory within SMEs). This was highlighted by the Premier, Helen Zille in the State of the Province Address delivered in 2014:

> "We … believe that entrepreneurship is a crucial vehicle for creating jobs, increasing economic growth and driving innovation. Over half of all formal employment in the country is provided by small and medium enterprises (SMEs). That is why we have prioritised providing support to SMEs so that they are able to start up, survive, stabilise and expand. We have supported the establishment of 20 access points across the province through our partnership with the Small Enterprise Development Agency; the Business Place operating in Philippi, Cape Town CBD and Khayelitsha; and the West Coast Business Development Centre which collectively have assisted over 22 000 SMEs with business development, procurement support and access to finance". (State of the Province Address, 2014)

Two main objectives of the Western Cape Government is to increase economic empowerment and mitigate poverty by promoting opportunities for citizens and businesses in the province (Western Cape Government, 2018b).

As illustrated in Figure 2.1, the Western Cape consists of six municipalities; the City of Cape Town, Cape Winelands, Central Karoo, Eden, Overberg and the West Coast (Western Cape Government, 2018b).

Figure 2.1: Municipalities of the Western Cape (The Local Government Handbook, 2016).

2.6.2 Levels of government

At a provincial level, the Western Cape Government consists of 10 ministries and 13 departments (Wesgro, 2012). The Department of Economic Development and Tourism was important in the context of the study because it is involved with understanding the regional economy, identifying economic opportunities, contributing toward government economic priorities and serves as an important link between business and government (Western Cape Government, 2018c). Furthermore, the Department of Economic Development and Tourism implements projects and programmes for businesses and aims to create opportunities for businesses and natives to develop the economy and increase employment in the country (Western Cape Government, 2018c).

2.6.3 Support information available

The Western Cape Government and other development agencies such as the Small Enterprise Development Agency provide support information to businesses such as micro-enterprises with the aim of enabling them to them to survive and be competitive (Bureau for Economic Research, 2016a). The support information often includes access to finance, capital financing, business formalisation, business skills development, products and services development and access to resources and infrastructure such as ICT and information (Western Cape Government, 2018a).

> "Our Enterprise Development Fund which is a partnership between the Western Cape Department of Economic Development and Tourism and the National Empowerment Fund has committed to just under R20 million in loan funding to small black-owned businesses over the last two financial years. 52% of these businesses have been female owned". (State of the Province Address, 2014).

Table 2.5 summarises some of the support information offered by the Department of Economic Development and Tourism.

Table 2.5: Support information offered by the Department of Economic Development and Tourism (Western Cape Government, 2018a).

Enterprise Development Initiatives
Informal Sector Business Support
Cape Capital Fund
Isivande Women's Fund
Emerging Business Support Programme
Financial Support for Businesses
Non-financial Support for Businesses

The Isivande Women's Fund is aimed at accelerating women's economic empowerment and the Emerging Business Support Programme provides SMMEs with core business knowledge and skills that form the basis of a successful business (Western Cape Government, 2018a).

At a provincial level, municipalities offer support information and services to encourage the development of SMMEs such as micro-enterprises (Mawela, Ochara & Twinomurinzi,

2016). This is to improve the formation of small businesses in underprivileged communities, improve entrepreneurial skills development to decrease unemployment, improve the development of micro-enterprises to SMEs and to offer valuable and effective support services to small business (Makoza, 2011). However, despite the myriad of support information available in most cases, the use of the support information has not been optimal, especially by micro-enterprises.

2.6.4 Level of usage of support information

The low use of the support information could be attributed to the increasing evidence of micro-enterprises not having sufficient awareness of support being offered and implemented by government and development agencies (Mitrovic & Bytheway, 2009). Another contributing factor could be the fact that support information for small business is not available and/or accessible in some areas, specifically rural areas (Makoza, 2011). Furthermore, an absence of cohesion and engagement of the relevant stakeholders involved in the support information for small business could cause scepticism on the advantages from the recipients (Mitrovic & Bytheway, 2009). Limited literacy levels such as computer literacy could also prevent micro-enterprises from accessing support information (Mawela et al., 2016).

The challenge of formalisation could have limited the access to support information. Most micro-enterprises usually do not maintain business records and are often unregistered (Williams et al., 2017). Therefore, micro-enterprises would have to register their business before they are able to receive support. However, most micro-enterprises operate in the informal sector, therefore, formalisation in certain instances limits the business activities that these enterprises could engage in (Jere et al., 2015). Another reason of the low use could be due to the support information being siloed and segmented across various levels (provincial and local) and departments of government making it challenging to access (Western Cape Government, 2018a). Furthermore, the content, structure and design of the support information may not be aligned with the information seeking patterns of micro-enterprises (Lokanathan & Kapugama, 2012).

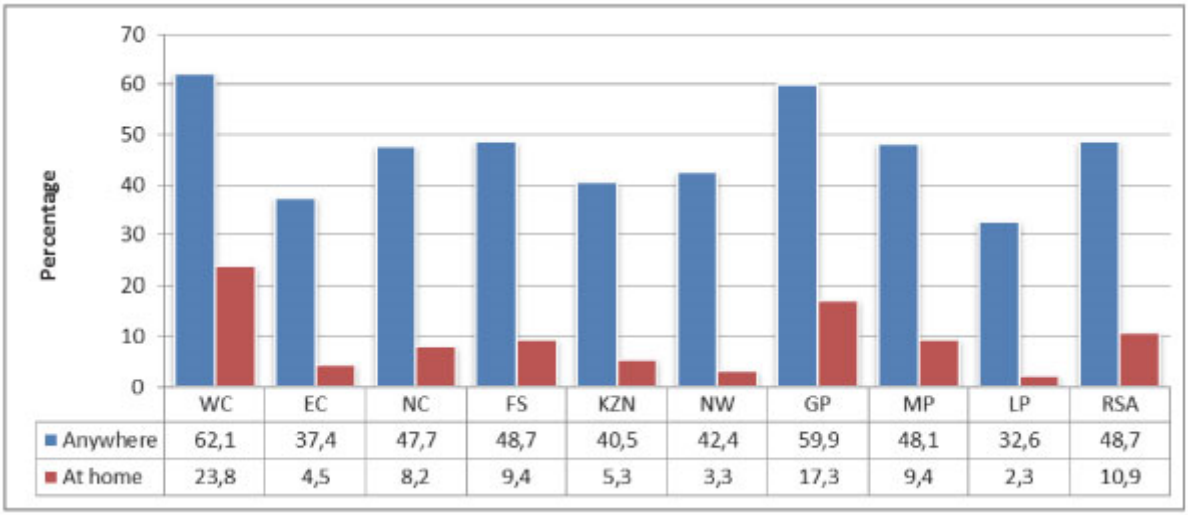
2.6.5 Internet connectivity

The Western Cape has one of the highest connectivity rates in the country which made it ideal for the study. This is based on the 'Western Cape Digital Readiness Assessment 2015' study which was authorised by the Department of Economic Development and Tourism and conducted by Research ICT Africa, the University of Cape Town and the University of the

Western Cape (Alfreds, 2016). The study determined that 93.8% of individuals in the province access the Internet using a mobile phone, compared to the national average of 70.8% (Department of Economic Development and Tourism, 2015). Furthermore, 38% of households in the province have a personal computer with ADSL internet access in comparison to the national average of 22% (Department of Economic Development and Tourism, 2015).

> "We will encourage the growth and development of the provincial economy through the support of broadband usage, infrastructure and readiness by businesses and citizens to stimulate broadband uptake in order to improve competitiveness". (Provincial Strategic Plan, 2015, p. 17)

Figure 2.2 illustrates the percentage of internet access to the South African Household per province.



	WC	EC	NC	FS	KZN	NW	GP	MP	LP	RSA
Anywhere	62,1	37,4	47,7	48,7	40,5	42,4	59,9	48,1	32,6	48,7
At home	23,8	4,5	8,2	9,4	5,3	3,3	17,3	9,4	2,3	10,9

Figure 2.2: Percentage of internet access to the South African Household (Statistics South Africa, 2014c).

The City of Cape Town is following the global trend of providing free Wi-Fi internet access to all of its citizens and is dedicated to ICT for economic and social improvement (Walton & Donner, 2012). In 2001, the Smart Cape initiative was pioneered to mitigate the digital divide within the city and grow the free offering of Wi-Fi to its citizens (Siebritz, 2015). The Smart Cape initiative was important because a significant amount of the city's population lives in poverty (Valentine, 2004).

2.7 E-Government

2.7.1 Definition

Electronic Government (e-Government) is the use of ICTs, mobile devices and mainly internet web-based applications to improve access and delivery of government services to citizens, businesses and other government agencies (Agangiba & Kabanda, 2016). Furthermore, E-Government enables interaction between citizens, business and other government agencies (Pokwana & Kyobe, 2013). Various examples of e-Government services include business licensing, tax filing, grant submission, tendering, etc. (Mutula, 2013). These services could be delivered using an e-Government portal (Joseph, 2009). Some of the benefits of e-Government include the provision of efficient and cost-effective services to citizens, empowerment of citizens and the promotion of transparent and effective governance (Agangiba & Kabanda, 2016). The prominence of e-Government is developing annually due to its effectiveness and applicability in several pertinent areas of society one such being the dependence on the progression of technology (Azmi & Kamarulzaman, 2010).

2.7.2 Levels of e-Government

E-Government undergoes different levels of development, namely emerging, enhanced, transactional and seamless web presence (Makoza & Chigona, 2013). At the first level (emerging), only a few services are offered and usually the web content is static (Yildiz, 2007). At the next level (enhanced), forms are provided online, but with no capabilities for transactions linked to them (Makoza & Chigona, 2013). The third level (transactional) enables users to make payments for transactions using the web (Yildiz, 2007). At the final level (seamless), most of the services for government are delivered online and there is an integration of services across departments (Makoza & Chigona, 2013). Table 2.6 summarises the different levels of e-Government.

Table 2.6: Levels of e-Government (Yildiz, 2007).

Level	Orientation	Services	Technology	Citizen
1. Web presence – emerging	Administrative.	Not many, if any.	Web only.	Going it alone.
2. Web presence – enhanced	Administrative, information.	Few forms, no transactions.	Web and e-mail.	Links to local agencies.
3. Web presence – transactional	Information, users.	Several forms and transactions.	Web, e-mail, digital signatures, public key infrastructure, portals and Secure Sockets Layer.	Some links to state of federal sites.
4. Web presence – seamless	Users.	Reflects all services provided in person, by mail and by phone.	Web, e-mail, digital signatures, public key infrastructure, Secure Sockets Layer and other available technology.	Crosses departments and tiers of government.

It is important for stakeholders involved in e-Government to understand the levels of e-Government because it could assist them with improving decision-making for e-Government services, especially for citizens and businesses (Makoza & Chigona, 2013). This could also help with progressing to the advanced levels of e-Government.

2.7.3 Categories of e-Government

E-Government initiatives are usually grouped into three main categories based on the users of the services (Yildiz, 2007). The primary categories of e-Government are Government-to-Government which involves intergovernmental operations and conducting electronic

exchanges between governmental stakeholders such as sharing data, Government-to-Citizen which involves interactions between government and citizens and Government-to-Business which involves initiatives such as procurement, licensing, and other activities that help to enable business-based economic growth (Pokwana & Kyobe, 2013). Table 2.7 summarises these categories inclusive of their characteristics, definition and examples.

Table 2.7: Categories of e-Government (Yildiz, 2007).

Parties of communication	Content	Dominant characteristics	Definition	Example
Government-to-Government (G2G)	Government information and services	Communication, coordination, standardization of information and services	E-administration	Establishing and using a common data warehouse
Government-to-Citizen (G2C)		Communication, transparency, accountability, effectiveness, efficiency, standardization of information and services, productivity	E-government	Government organization Web Sites, e-mail communication between the citizens and government officials
Government-to-Business (G2B)		Communication, collaboration, commerce	E-government, e-commerce, e-collaboration	Posting government bids on the Web, e-procurement, e-partnerships

The study involved businesses such as micro-enterprises therefore, it focused only on the G2B category.

2.7.4 Government-to-Business

Government-to-Business (G2B) refers to relationships between organisations of public administration and businesses (Agangiba & Kabanda, 2016). The relationship could deal with the need for information from businesses or a transfer of an official document to a statutory body (Yildiz, 2007). The aim of the G2B category is for a government to use an electronic method to fulfil the service requirements of businesses with the goal of enabling digital communication, supplying comprehensive access to information and minimising limitations on businesses (Shambour, 2012). Furthermore, to improve productivity by supplying businesses with access to organised and up-to-date information, reducing red tape, and creating a clear business environment for dealing with government, thereby reducing the expense of doing business and saving valuable time (Jantjies, 2010).

Businesses engage in e-Government using two main tasks: search-oriented and transaction-oriented tasks (Reddick & Roy, 2013). Search-oriented includes searching for

contact information about a government agency, ascertaining services the agency provides and searching for employment and contract opportunities provided by the agency. On the other hand, transaction-oriented tasks involve a business completing a task such as licensing, tax filing or grant submission using an e-Government portal (Joseph, 2009).

Micro-enterprises like all other businesses may benefit from using e-Government (Praditya & Janssen, 2015). Some benefits could include reduced time in setting up a new business (reduced red tape), improved conformity to government rules and regulations for operating a business (licensing and tax filing), having a more convenient and clearer method for conducting business with government through e-Procurement and conducting e-Business and e-Commerce (online business) (Makoza, 2011). Businesses could learn about new and ongoing government projects and programmes related to business support information using an e-Government portal (Jantjies, 2010).

2.7.5 E-Government in Developing Countries

In the past, Sub-Saharan Africa was considered as a "technological desert" with regard to technology adoption, where the majority of the countries experienced an ineffective level of ICT usage, specifically for e-Government purposes (Rorissa & Demissie, 2010). E-government is now seen as a resource for improving governance, especially in African governments where perceptions of corruption are high, reducing administrative expenses and delivering effective services (Bal et al., 2015). An example of delivering effective services could be using e-Government to support the provision of key services which could be accessed on a 24-hour basis, thereby contributing toward the well-being of citizens and the socio-economic development of developing countries (Makoza & Chigona, 2013). Therefore, e-Government has the potential of improving the quality of government services for citizens and businesses (Agangiba & Kabanda, 2016).

The Internet Penetration Rate has developed significantly since the 20th century, however, the level of diffusion and implementation of e-Government services in developing countries have not been satisfactory (Rorissa & Demissie, 2010). For developing countries in Africa to achieve the most value of e-Government, its implementation should be context-oriented (Mutula, 2013). Low literacy rates limit the forms of media available for e-Government implementations (Matavire, Chigona, Roode, Sewchurran, Davids, Mukudu & Boamah-Abu, 2010). The level of functional literacy is identified as one of the main challenges for the development of e-Government in Africa (Mawela et al., 2016). Several studies highlight that people who lack relevant ICT skills are disadvantaged from accessing information for

economic opportunities and usually do not benefit from using e-Government (Almarabeh & AbuAli, 2010).

The obstacles for the low adoption rate of e-Government services in developing countries relate to the pervasive lack of infrastructure, lack of human capacity, insufficient expertise, implementation plans, appropriate access methods, etc. (Rorissa & Demissie, 2010). Consequently, many e-Government projects in African countries result in failure (Bwalya & Healy, 2010). Some studies highlight that in Africa, the implementation of e-Government is usually lagging and focused more on urban metropolitan cities, thereby excluding citizens in rural areas from accessing ICTs (Evans & Yen, 2006). Although African countries are considered as the last adopters of the required methodologies and technologies for the successful implementation of e-Government services, Africa governments understand the need to develop an Information Society through the effective use of ICT to improve economic and social progression (Rorissa & Demissie, 2010).

2.8 E-Government in South Africa

The South African Government recognises the need to develop an Information Society and use the capabilities of ICTs for the economic and social development benefit of the country (Cloete, 2012). Furthermore, the South African Government understands the need for improvement and transformation of its key activities to improve the efficiency and effectiveness of its processes (Kaisara & Pather, 2011). Therefore, managing information, internal functions and serving citizens and businesses are key to the government's strategy (Mutula & Mostert, 2011).

E-Government is strongly viewed as an important component for developing a South African Information Society and within this e-Education, e-Health and the development of Small and Medium Enterprises within the ICT sector (Kaisara & Pather, 2011). The government's vision for achieving a fully-fledged e-Government is to provide services available to all citizens; with the services being accessible to all citizens anytime, anywhere and through different access devices and media (Mutula & Mostert, 2011; Rorissa & Demissie, 2010). Furthermore, the e-Government vision outlines the prime concerns and main aims of the government with regard to Government-to-Government, Government-to-Citizen, and Government-to-Business transactions (Cloete, 2012). It could be argued that the local governments (i.e. municipalities) of South Africa are better positioned to deliver on the vision of e-Government because they are closer to communities (Mawela et al., 2016).

Batho Pele (people first) is a government framework for equal access to effective public service delivery (Twinomurinzi & Visser, 2009). The objective of Batho Pele is to access the level of public service in relation to the ICT support the government has set in terms of its service standards (Monyepao & Weeks, 2012). In South Africa, e-Government is linked to public service transformation which is guided by the principle of Batho Pele and public service for all (Tshandu & Kariuki, 2010). Acknowledging that this transformation is not a simple task, the government has recognised the need for change in terms of how officials think and act, share information between departments and their staff, and with citizens and businesses (Cloete, 2012).

In South Africa, the constitution of the country makes it necessary for the government to provide inclusive access to government information (Matavire et al., 2010). In response to this, several national and provincial e-Government initiatives have been implemented (Pokwana & Kyobe, 2013). Some examples include the Batho Pele Portal, the South African Revenue Service e-Filing system and the Cape Gateway Project (Matavire et al., 2010). The South African Revenue Service e-Filing system enables citizens and businesses to submit tax returns, make payments and other additional transactions (Pillay, 2012).

2.8.1 E-Government in the Western Cape

The Western Cape Province is not new to the notion of e-Government (Jantjies, 2010). The Western Cape Government has achieved distinguished awards due to the vision, diversity and success of its e-Government projects (Vosloo & Van Belle, 2005). The Western Cape Government's e-Government portal, namely the Cape Gateway was considered as one of the best and was acknowledged with an award at the World Summit on Information Society (e-Government Strategy, 2012). The portal was both developed and viewed through the lens of the Western Cape Government with the main purpose being to deliver information to citizens (Western Cape Government, 2018). Currently, the Western Cape Government Provincial e-Government projects (e.g. e-Government websites) are regarded as one of the best in the country (Matavire et al., 2010).

In the Western Cape, e-Government projects are guided by the Western Cape Government's e-Government Strategy. The main aims of the e-Government strategy are to use ICT to promote efficiencies in the Western Cape Government, thereby availing resources by completing the tasks of government efficiently (e-Government Strategy, 2012). Furthermore, to transform and deliver services for the benefit of citizens, businesses

and other stakeholders (Western Cape Government, 2018). While it is key to assist large businesses that contribute substantially toward the economy of the Western Cape, the support for developing and existing SMEs is an essential component of the e-Government Strategy (e-Government Strategy, 2012).

Currently, the Western Cape Government is at the first level of e-Government maturity in which only a few services are offered and usually the web content is static (Western Cape Government, 2017d). However, the Western Cape Government plans to achieve level four of e-Government maturity which is ideal for the requirements of citizens, businesses and other stakeholders' and actively involves them in government activities and decision-making processes (e-Government Strategy, 2012). Figure 2.3 illustrates the maturity levels of e-Government in the Western Cape.

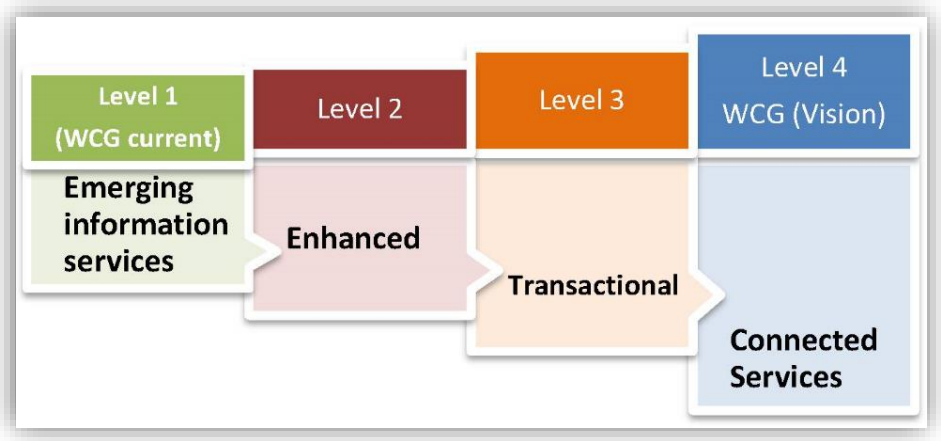


Figure 2.3: Maturity levels of e-Government in the Western Cape (e-Government Strategy, 2012, p. 5).

2.8.2 E-Government Challenges in South Africa and the Western Cape

Certain challenges limit and stagnate the implementation and development of e-Government in South Africa. For example, many of the e-Government plans in South Africa are still in their formative stages of development due to the country being a developing nation (Gomez, 2015). Some challenges include:

> "The weak political leadership and ineffective management of the e-Government ministerial portfolio has contributed to the slow implementation of the nation's e-Government policy". (Pokwana & Kyobe, 2013, p. 4)

> The culture of operating in silos across various levels (national, provincial and local) and departments of government which fragments information and delays service delivery. (Mawela et al., 2016)

It was anticipated that e-Government would eliminate the culture of silos and aid governments to be more cohesive and citizen-centric (The World Bank, 2011).

Western Cape Government faces several challenges with regard to e-Government and its projects (Cloete, 2012). These include limited internal capacity in project management such as IT specialists with relevant skills, ineffective project planning, lack of clarity in objective setting and the non-re-engineering of activities before implementation (Mawela et al., 2016). A recent survey showed that "the deployment of e-Government services (e.g. G2C and G2B) was found in only 13% of the municipalities…" (Department of Economic Development and Tourism, 2015, p. 13). Other challenges include lack of funding and lack of ICT infrastructure, especially in rural areas (Pokwana & Kyobe, 2013).

2.9 E-Government accessibility

2.9.1 Definition

The International Organisation for Standardisation defines accessibility as "the degree to which a product, device, service, environment or facility is usable by as many people as possible, including by persons with disabilities" (International Organisation for Standardisation, 2010, para. 1). Accessibility could be examined at three levels, namely infrastructure, service and content (Velaga, Beecroft, Nelson, Corsar & Edwards 2012). "When we speak about access, what we really mean is access to information, knowledge, and communications opportunities, not access to one specific service or technology. [ICTs] are just tools" (Kirkman, 2000, p. 11). Accessibility to information offers individuals the opportunity "to undertake production, engage in labour markets, and participate in reciprocal exchanges" with other individuals (Ellis, 2000, p. 31). Some accessibility challenges include skills access, information access and user access (Al-Khalifa, 2012).

Web accessibility is described as enabling individuals to use, perceive, understand, navigate and interact with the web (Alawneh, Al-Refai & Batiha, 2013). Web accessibility aims at ensuring that websites are accessible to all people; whereas usability emphasises on developing websites to enable people to achieve specific objectives (Al-Khalifa, 2012; Huang & Benyoucef, 2014).

2.9.2 Accessibility of e-Government websites

A key difference of e-Government in contrast to alternative electronic services is that the government services, namely e-Government websites should be accessible to a diverse set of users (Tashtoush, Ala'F & Al-Sarhan, 2016). However, for e-Government websites to be accessible to all, the web-based applications should be designed to be easy to interact with irrespective of the device being used (mobile phone, laptop, etc.) (Kamoun & Basel Almourad, 2014).

Access to ICTs (e.g. e-Government) could change the condition of individuals that have been deprived of it (Nkwe, 2012). However, that there is a lack of research regarding the accessibility of e-Government services in developing countries (Odat, 2012). Majority of studies involving accessibility of e-Government services have focused on developed countries with developing countries, specifically Africa receiving marginal attention (Agangiba & Kabanda, 2016). Prior research has analysed topics such as factors for the adoption of e-Government, implementation of e-Government and involvement of e-Government among others (Bwalya et al., 2013; Bwalya & Healy, 2010; Dwivedi et al., 2012; Grönlund, 2011). Consequently, the challenges of accessibility for e-Government services in developing countries are still not clear (Makoza & Chigona, 2013).

2.9.3 Challenges of accessing support information using e-Government websites

The following are challenges that usually limit the access to support information using e-Government websites:

i. Lack of affordability
ii. Limited ICT literacy skills.
iii. Incomplete and disorganised information.
iv. Ineffective design.
v. Lack of mobile-friendly e-Government websites.
vi. E-Government maturity levels.
vii. Language barriers.

One of the many challenges of e-Government is access to services, with the cost of access to e-Government services being a key obstacle (Pokwana & Kyobe, 2013). For owners' of micro-enterprises, affordability is usually the main challenge and overcoming other challenges cannot be achieved without a purposeful intervention to ensure actual

affordability (Makoza & Chigona, 2014). The lack of affordability did not limit micro-enterprises from accessing support information using e-Government websites.

Micro-enterprises experience challenges with information that is incomplete and disorganised (i.e. structure) (Adams, 2012; Mshenga & Richardson, 2013). Consequently, many micro-enterprises experience challenges when trying to access, evaluate and apply information in their business activities (Makoza, 2011). Incomplete and disorganised information was a challenge that discouraged micro-enterprises from accessing support information using e-Government websites.

Ineffective design and poor quality of websites could lead to an inaccessibility of information on the Internet (Agangiba & Kabanda, 2016). However, if micro-enterprises were able to find previously inaccessible information using ICTs (e.g. e-Government), it could assist them in acquiring information about licensing, tax filing, grant submission, etc. (Good & Qureshi, 2009). Ineffective design such as navigation and poor quality of e-Government websites was a challenge that limited micro-enterprises from accessing support information using e-Government websites.

Majority of micro-enterprises use mobile telephony for informational purposes (Cáceres et al., 2012). This is consistent with other statistics regarding the accessibility of cellphones in the Western Cape i.e. 93.8% of individuals access the Internet using a mobile phone (Department of Economic Development and Tourism, 2015). However, the e-Government websites were not designed to be mobile-friendly which limited micro-enterprises from accessing support information using e-Government websites.

Currently, the Western Cape Government is at the first level of e-Government maturity in which only a few services are offered and usually the web content is static (Western Cape Government, 2017d). The e-Government maturity challenge was a key reason why the support information was outdated, incomplete, irrelevant, complex, incomprehensible, disorganised and not mobile-friendly; discouraging micro-enterprises from accessing it using e-Government websites.

Language barriers and literacy levels are challenges that limit the accessibility of e-Government services (Grönlund, 2011). As previously mentioned, the predominant language spoken in the Western Cape is Afrikaans, with English and isiXhosa being the additional leading languages, and only six municipalities had the option of choosing a local language besides English i.e. Afrikaans (Department of Economic Development and Tourism, 2015; Western Cape Government, 2018b). Limited language availability was a

challenge that limited micro-enterprises from accessing support information using e-Government websites.

Access to ICTs (e.g. e-Government) does not directly transform to use (Chigona et al., 2011). Therefore, micro-enterprises could have access to support information using Government websites, but do not necessarily have to access support information. Therefore, accessibility does not equal usability. However, in the study, all of the 17 micro-enterprises accessed the support information using Government websites.

2.10 Summary of chapter

Micro-enterprises are important in the economy of developing countries. In South Africa, the success of micro-enterprises may improve socio-economic development. ICT use in micro-enterprises may increase their chances of both survival and growth. However, ICT use in micro-enterprises is not straightforward, especially because these enterprises experience many challenges. The impact of using ICT in micro-enterprises needs to be understood so that challenges experienced by micro-enterprises are minimised.

3. Theoretical Framework

This chapter presents the theoretical framework applied to the study. The justification for the selected framework is also presented in this chapter.

3.1 Definition

A theoretical framework is as a set of empirical theories applied to comprehend and introduce a phenomenon, established on a group of interconnected concepts, definitions and propositions which form the building blocks of a theory (Anfara & Mertz, 2014). A theory comprises of empirical segments of data and as a whole forms a theoretical framework that could be used in various contexts (Cohen et al., 2013). In terms of qualitative research, theory could be used to describe phenomena under examination, guide the researcher on challenges to be examined and the method in which the study should be conducted (Creswell, 2009).

3.2 Capability Approach

The Capability Approach framework was created by the economist and philosopher Amartya Sen (Zheng & Walsham, 2008). Academics from various disciplines have been instrumental in the development and explanation of the CA framework in both applied and empirical research (Nussbaum, 2009). The Capability Approach is often used for examining and assessing inequalities, accessibility, e-Government and standard of living among others (Alampay, 2006b; Good & Qureshi, 2009; Macueve, 2008; Robeyns, 2005a; Zheng, 2009). The main emphasis of the framework is on an individual's functionings which are beings and doings (e.g. being literate) and capabilities (e.g. being healthy) which are freedoms or opportunities to achieve the functionings; rather than focusing on the desire-fulfilment, income or expenses of individuals' (Robeyns, 2006; Zheng & Walsham, 2008). The Capability Approach emphasises not on the amount or level of income, but on the lack of capabilities such as "access to healthcare, education, information, participating in economic life and the autonomy in decision making" (Zheng & Walsham, 2008, p. 224). This distinguishes CA from other theoretical frameworks (Robeyns, 2003). Not only has CA achieved recognition as a multi-disciplinary analytical instrument, but it has also been used in numerous ICT studies (Dasuki et al., 2014; Grunfeld et al., 2011; Stillman & Denison, 2014). Therefore, there was a precedent to use CA for the study.

3.3 Key concepts of the Capability Approach

The assessment of the framework is in areas of opportunities, resources, entitlements and the achievements recognised (Robeyns, 2003). The framework additionally examines the preferences of individuals in the act of choice, and the factors affecting the conversion of accessible resources into actual achievements (Zimmermann, 2006). Table 3.1 outlines the key lines of examination in the framework in relation to these attributes.

Table 3.1: Concepts of CA (Nyemba-Mudenda, 2015, p. 56).

Concept	Description	Examples
Commodity	Resources – their characteristics, access and use generate capabilities for a person	Services, products, goods
Capabilities/ Potential functionings	The alternative combinations of actions/activities that are feasible for a person to achieve – things that a person is effectively able to do and to be to live a life they value	To be healthy
Conversion factors	Individual capacities or personal characteristics and social structures that affect the transformation of capabilities into achieved outcomes	Intellect, socio-cultural factors
Functionings	What a person chooses to be or do from their capability set to live a life they value (achieved outcomes)	Being literate
Freedom	Choice in terms of people's preferences and perceived value of goods (the freedom to lead different types of life is reflected in the person's capability set).	Choice, preferences
Agency	A person's ability to pursue and realise goals that he/she values and has reason to value	
Well-being	The state of being healthy, happy, or prosperous; welfare	

3.3.1 Capabilities and Functionings

Zheng and Walsham (2008, p. 225) state that "a functioning is an achievement whereas a capability is the ability to achieve"; therefore, there is a relationship between functionings and capabilities (Robeyns, 2003). Capabilities can be explained as actions and activities which an individual would like to participate in and be whom the individual would like to be (Robeyns, 2005a). Furthermore, capabilities are optimistic freedoms or opportunities which individuals need to endeavour to appreciate beings and doings that make an individual's life feel valued (e.g. the freedom to attain different lifestyles) (Robeyns, 2005b). For the development of capabilities, certain capabilities would need financial resources and economic production, whereas other capabilities would include institutional settings and political arrangements, social or cultural practices, social structures and norms (Zheng & Walsham, 2008). Examples of functionings are being literate, being confident, working, etc. (Robeyns, 2006).

The difference between achieved functionings and capabilities (possible funtionings) could effectively be interpreted as potential opportunities i.e. achievements on the one hand and opportunities or freedoms from which an individual could select from to achieve the functionings on the other (Robeyns, 2005b). Having access and understanding how to use ICT indicate capabilities and transforming these capabilities to searching for information (e.g. support information) on the Internet (e.g. using e-Government websites) would denote a functioning (Nyemba-Mudenda, 2015).

Capabilities in the framework are described at a theoretical level making them unclear for methodological use in empirical conditions (Nyemba-Mudenda, 2015). Sen intentionally left it like this because different capabilities and functionings could be appropriate in diverse contexts and should be described by the native individual(s) (Nussbaum & Sen, 1993).

3.3.2 Freedoms and Commodities

Freedoms denote decisions and actions taken by individuals with regard to their personal lives in a particular circumstance (Robeyns, 2003). For example, individuals have the freedoms or valued opportunities to live the type of life they would like to live, to do what they would like to do and be the individual they would like to be (Nyemba-Mudenda, 2015). When individuals effectually have these considerable opportunities, they could select those opportunities which they regard as the most valuable (Zheng & Walsham, 2008).

Commodities refer to goods and services which are of specific importance to individuals and do not have to be income or monetary related (Robeyns, 2006). The use of commodities (e.g. technology) contributes to social situations and to personal characteristics which successively feedback to conversion factors and decision-making instruments (Robeyns, 2005a). Therefore, commodities are imperative for their contributions to individual capabilities and to conversion factors (Nyemba-Mudenda, 2015). Commodities also serve as a source of achieving (Robeyns, 2006). The commodities in the study were ICT for general business activities and e-Government for accessing support information.

3.3.3 Conversion Factors

The relationship between a commodity and functionings to achieve distinct doings and beings are affected by environmental factors, social factors and personal characteristics (Robeyns, 2005b). “To develop capabilities from commodities (goods and services), the conditions or conversion factors required are not always financial resources or economic

production, but involve institutional settings and political arrangements, social or cultural practices, social structures and norms" (Nyemba-Mudenda, 2015, p. 58). Figure 3.1 illustrates the three categories of conversion factors.

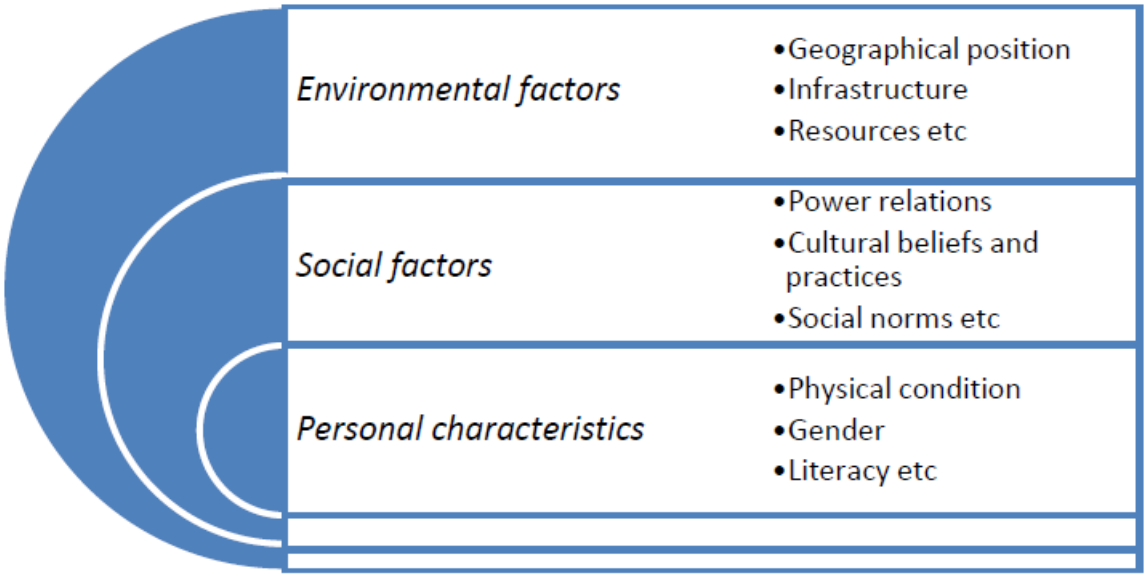


Figure 3.1: Three categories of conversion factors (Nyemba-Mudenda, 2015, p. 58).

The attributes of a commodity produce a capability set for individuals, but an individual's use of the opportunities into functionings varies depending on the setting or context which is considerably affected by the conversion factors (Robeyns, 2005a). In terms of an e-Government project such as G2B in developing countries, distributing government information pertaining to businesses using short message service on mobile devices; personal factors, namely literacy could influence the manner which an owner of a micro-enterprises peruses and understands the information. Due to social settings, women in underprivileged communities of developing countries are sometimes marginalised and deprived of microbusiness activities such as entrepreneurship as opposed to men because of gender differences (Kotelnikov, 2014). In terms of environmental factors, namely access to electricity, network coverage and the cost of mobile data present a challenge for micro-enterprises using mobile devices in developing countries (Donner & Escobari, 2010). The relationship between commodities and conversion factors is dynamic in nature, meaning that conversion factors are continuously changing (Robeyns, 2005a).

3.3.4 Agency and Well-being

The framework also consists of agency and well-being. Agency is defined as the freedom to plan and follow an individual's own objectives and interests while the pursuit of an

individual's own well-being could be one of the objectives and interests (Zheng & Walsham, 2008). For example, the pursuit of an individual's own well-being such as their standard of living could be one of the objectives and interests. Agency could also include improving the well-being of others, respecting social and moral norms, or acting on individual commitments and the pursuit of a range of values (Alexander & Phahlamohlaka, 2006). This difference assists in comprehending and describing a person's actions (Nyemba-Mudenda, 2015).

Agency freedom is the freedom to achieve what an individual has the intention to value (e.g. at a personal level) and well-being freedom is the freedom to have a good life (Grunfeld et al., 2011). The framework is essentially concerned with a person's actual opportunities to achieve their agency freedom and well-being freedom (Zheng & Walsham, 2008).

The researcher could limit their view by focusing only on well-being during the assessment because an individual's activities are to increase their agency and well-being (Sen, 1993). An emphasis on "agency as well always transcends an analysis in terms of functionings and capabilities, and considers agency goals which yield an understanding of why and how an individual uses a commodity, the opportunities derived, and the contextual conditions affecting the realisation of outcomes" (Nyemba-Mudenda, 2015, p. 59). Therefore, focusing on agency is equally important for the researcher of a study. In consideration of these points, the study also focused on the agency of micro-enterprises.

3.4 Limitations of the Capability Approach framework

The Capability Approach has been criticised for being complex to control and operationalise, therefore, limiting the framework from the meticulous application in development and implementation (Kleine, 2011). Although CA has been broadly cited in ICT research, its application is limited due to the complexity in using it methodically and because of the absence of technology in Sen's writings (Zheng & Walsham, 2008). Sen did not provide guidelines on how to apply the framework making it difficult to apply (Hatakka & De, 2011). However, other authors argue that the criticism around CA is a consequence of misunderstanding it (Comim, 2001; Robeyns, 2003). To mitigate these challenges, the researcher separated the research problem into two commodities to simplify the analysis and improve the understanding of the research problem.

3.5 Justification for selecting the Capability Approach for the study

Access to a commodity is considered as a required precondition to using it (Nyemba-Mudenda, 2015). The framework progresses past access; it expresses individual differences, capabilities and decisions determine if people use the commodities, and how they use and value the commodities (Alampay, 2006a; Alampay, 2006b). In terms of e-Government, this is in contradiction of numerous assessments of ICT access that do not examine the difference between the ICT and e-Government commodities by diverse individuals' use, rather the assessments are formed on universal access and evaluate both commodities as one (Alampay, 2006b). The Capability Approach places importance on an individual's actions when access is provided to them, whether an individual decides to use ICT or not and how an individual uses it (Nyemba-Mudenda, 2015).

The aim of the study was to investigate the challenges that micro-enterprises experience in accessing support information using e-Government websites. The study considers ICT and e-Government as commodities (resources) and emphasises what micro-enterprises are able to do with the commodities such as search for information. It also considers the conversion factors, namely e-Government accessibility challenges that affect the achievement of diverse opportunities such as improved business competitiveness. Lastly, it examines micro-enterprises' agency to use diverse opportunities to achieve the kind of lives which they value such as improve their standard of living. Therefore, CA was used as a theoretical lens to investigate the study and the key concepts served as the constructs of the framework.

3.6 Summary of chapter

Assessing the impact of accessing support information using e-Government websites to improve the competitiveness of micro-enterprises requires an understanding of many factors. These may be technological and governmental factors. The Capability Approach is appropriate for the assessment of the impact of accessing support information using e-Government websites because it takes into consideration the wider scope of the context of micro-enterprises such as personal agency.

4. Research Methodology

This chapter presents the research methodology and rationale for using a qualitative approach. The research instrument, data collection methods, sampling method and the justification for using them are presented in this chapter. The data analysis method used in the study is also discussed, followed by the ethical considerations for the study.

4.1 Research Ontology

Constructivism is a theory established on observation and methodical research regarding how individuals learn (Collis & Hussey, 2013). Constructivism asserts that learning is a dynamic, contextualised process of creating knowledge instead of obtaining it (Schwandt, 1994). The theory explains that individuals create their own interpretation and knowledge of the environment by experiencing events and reflecting on those experiences (Schwandt, 2000). For example, if an individual experiences a new event, they would reconcile the event with past thoughts and experiences, possibly altering what they believe, or perhaps reject the new information as unimportant (Ertmer & Newby, 1993). The ontological approach challenges the proposition that groups (e.g. organisation and culture) are pre-given and thus, challenge social actors as extrinsic realities that they have no role in forming (Schwandt, 1994). Social phenomena and their interpretations are constantly being achieved by social actors (Myers, 2013). It infers that social phenomena and groups are created through social contact and are in a continuous condition of revision (Bryman, 2015).

With the constructivist approach, the researcher is usually dependent on the views of the participant in terms of the condition being studied and acknowledge the effect on the study regarding their individual experiences and background (Creswell & Clark, 2007). Furthermore, a study using a constructivist approach is usually guided by the study's epistemological position such as an interpretive paradigm; and the researcher often relies on using qualitative data gathering techniques to complement the constructivist approach (Creswell & Clark, 2007; Madill et al., 2000). The study endeavoured to understand and interpret phenomena in terms of the meanings individuals bring to the researcher in a real-world context (Lincoln et al., 2011). Therefore, the adoption of a constructivist approach being guided by an interpretive paradigm, and the application of qualitative data gathering techniques.

4.2 Research Paradigm

A research paradigm can be described as a set of ideas that manage a study (Denzin & Lincoln, 2011). Research paradigms influence how the world is perceived, the behaviour of the researcher, the methods and the manner of contemplating about reality (Gray, 2013). There are three broad paradigms in qualitative research: interpretive, positivistic and critical each with its own advantages and disadvantages (Myers, 2013). The researcher could use one or a combination of the research paradigms based on the suitability of the study in question (Venkatesh, Brown & Bala, 2013).

An interpretive paradigm is frequently used in Information Systems research (Goldkuhl, 2012). The researcher may use an interpretive paradigm to comprehend and describe phenomena through the experiences and meanings that are assigned to them by individuals within a specific context i.e. social and/or business environment (Myers, 2013). The purpose of the study was to describe the challenges that micro-enterprises experience in accessing support information using e-Government websites. Therefore, an interpretive paradigm was used to describe the phenomena of e-Government accessibility through the experiences of micro-enterprises within a business context. Because of the paradigm's subjective position in examining a phenomenon, interpretive research provides possibilities for more pragmatic results and diverse interpretations (Kaplan & Maxwell, 2005). The study aimed to investigate and provide pragmatic results and diverse interpretations of the challenges that micro-enterprises experience in accessing support information using e-Government websites, therefore, the adoption of an interpretive paradigm.

4.3 Research Purpose

Descriptive research could involve describing categories of information (e.g. methods of communication) when employing technology in a group environment (Svensson, 1984); or providing information regarding the naturally transpiring behaviour, viewpoint or attributes of a specific group (Bickman & Rog, 2008). Descriptive research may be used when conducting research with an interpretive paradigm to describe phenomena; and when the research involves a single occasion communication with groups of individuals (cross-sectional research) (Hegarty, Gunn, Chondros & Small, 2004; Myers, 2013). Descriptive research often involves collecting data that explain phenomena and then categorises, tabulates, illustrates and explains the data gathered (Campbell & Stanley, 2015). This type of research generally makes use of visual support (charts and graphs) to assist the reader to comprehend the research outcomes (Gall, Borg & Gall, 1996). Descriptive research

plays an important role in research by making knowledge lucid that could otherwise go unnoticed (Krathwohl, 1993). It also has the potential to produce meaningful data that could result in key recommendations for policymakers such as the Department of Economic Development and Tourism (Wehrs, 1992).

Data gathering techniques used in descriptive research are usually interviews, surveys and observations (Campbell & Stanley, 2015). Descriptive research covers both qualitative and quantitative methods, therefore, it enables the capability to explain situations in rich or less depth as required (Glass & Hopkins, 1984). When profound, chronicle explanations of small figures of units of analyses are included, the study employs description as an instrument to categorise data into patterns that emanate during the data analysis (Joffe, 2012; Yin, 2013). The patterns can assist the reader's mind in understanding the qualitative research and its inferences (Gall et al., 1996).

4.4 Research Approach

Deductive and inductive reasoning are general methods of logic used in studies to reach a conclusion (Thomas, 2006). Deductive reasoning includes a hierarchy of facts to reach a more distinct conclusion (Burney, 2012). A deductive approach to the theory may be used, when the study starts by establishing a theoretical framework based on the available literature (Saunders, 2011). An analysis using a deductive approach is influenced by a framework or theory supporting the study (Thomas, 2006). The study adopted a deductive approach to the theory; it used Sen's Capability Approach, as a theoretical framework to investigate the challenges that micro-enterprises experience in accessing support information using e-Government websites.

4.5 Research Strategy

Qualitative research is a multi-faceted approach (using diverse qualitative procedures and data gathering techniques) to social interaction, intended at illustrating, understanding and explaining this interaction in relation to the meanings which individuals (subjects) assign to it (Schurink, 2001). The foundation of this type of research is embedded in the theoretical principles of interpretivism, relativism and constructivism (Creswell, 2009). Qualitative research is usually interpretivist, constructionist and naturalistic among others (Sarantakos, 2012). Qualitative research also assists the researcher with cultivating a profound understanding of the cultural and social environment which research participants are

involved in (Myers & Newman, 2007). Figure 4.1 illustrates the possibilities of qualitative research.

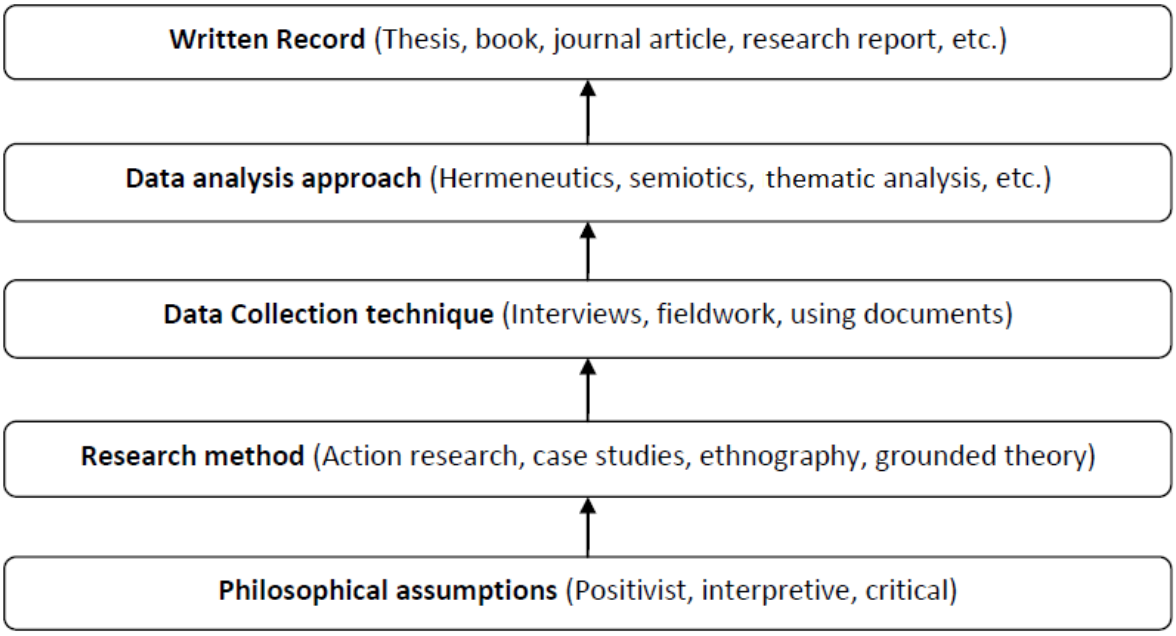


Figure 4.1: Possibilities of qualitative research (Myers, 2013).

Majority of studies focusing on developing countries have used a quantitative research strategy to assess both micro-enterprises and e-Government. Tanle and Abane (2017) highlight that the literature lacks qualitative research which assesses how entrepreneurs such as micro-enterprises interact with new methods (e.g. Government-to-Business) which are available for obtaining information and communicating. Therefore, the need to use a qualitative strategy to investigate the research problem and add newness to the research area. The study also used a qualitative strategy for the collection, analyses and interpretation of non-numerical research data (Saunders, 2011). Furthermore, the qualitative strategy complements the constructivist approach, interpretive paradigm and data collection techniques of the study.

4.6 Unit of Analysis

A unit of analysis is often limited to time and location (Yin, 2013). “The key issue in selecting and making decisions about the appropriate unit of analysis is to decide what it is you want to be able to say something about at the end of the study” (Grünbaum, 2007, p. 83). The unit of analysis for the study involved individual micro-enterprises (participants) in the Western Cape.

4.7 Timeframe

Research studies can be either longitudinal or cross-sectional (Gray, 2013). A “study of a particular phenomenon (or phenomena) at a particular time” is referred to as a cross-sectional study (Saunders, 2011, p. 155). A cross-sectional timeframe may also be used to complement a descriptive research approach (Hegarty et al., 2004). The study adopted a cross-sectional timeframe due to the time constraints of the study i.e. the data was collected over a specific period and because the study adopted a descriptive research approach.

4.8 Sampling Method

The objective of sampling is to understand characteristics of the subset of the population in question, making it probable to infer the properties of the population elements (Mack et al., 2005). With non-probability sampling, only a particular group representative of the population is chosen (Sekaran, 2003). Purposive sampling and snowballing sampling are examples of non-probability sampling (Sekaran & Bougie, 2011). Purposive sampling is used to select participants who can provide information that adheres to the selection criteria for the study (Sekaran & Bougie, 2011). On the other hand, snowball sampling is used to select new participants which are based on the suggestions of those who have participated in the study (Biernacki & Waldorf, 1981). The study aimed to find meaning rather than to measure; therefore, non-probability sampling methods such as purposive sampling and snowballing sampling were used to select micro-enterprises that conformed to the selection criteria and provide access to these enterprises and needed data (Sekaran, 2003; Strydom & De Vos, 2001).

4.8.1 Sample Criteria

To identify participants for the study, a selection criterion adopted from Gomez (2013) was used. The selection criteria consisted of the location, service, education and computer literacy, characteristics of micro-enterprises and duration of operations. A critical challenge that many owners of micro-enterprises face is limited literacy levels (Jere et al., 2015). According to the General Household Survey by Statistics South Africa in 2012, an education level of Grade 7 qualifies as the National Literacy Level (Department of Basic Education, 2012). Therefore, an education level of Grade 7 was selected for the study because of its suitability for micro-enterprises.

The literature indicates that registration has a positive effect on the performance of micro-enterprises (Masakure, Henson & Cranfield, 2009). Registration also enables micro-

enterprises to achieve recognition and gain the advantages of access to support, licensing and taxation incentives (Williams et al., 2017). Formalised (i.e. registered) micro-enterprises were selected for the study because they conform to all the legal regulations. Therefore, formal enterprises could be more inclined to access support information using e-Government websites than informal micro-enterprises (i.e. unregistered). Table 4.1 summarises the criteria that were used to select the micro-enterprises for the study.

Table 4.1: Summary of selection criteria for micro-enterprises.

Criteria	Details
Location	The micro-enterprise should be located in the Western Cape, South Africa.
Service	The owner should be aware of support information that is accessible using e-Government websites.
Education and computer literacy	The owner should have at least completed Grade 7 and be computer literate.
Characteristics of micro-enterprise	The micro-enterprise should have less than five employees, have an annual turnover of less than R0.2 Million (R200 000) and an annual net asset value of less than R0.1 Million (R100 000). Furthermore, the owner should keep business records, have a separate bank account, be registered with all required authorities, pay taxes, have a physical address and contact details.
Duration of operations	The micro-enterprise should be operating for at least three years.

4.8.2 Profile of Participants

Table 4.2 summarises the profiles of the 17 participants which participated in the study.

Table 4.2: Profile of participants.

Pseudonym	Micro-enterprise	Type	Duration	Gender
Respondent 1	Manufacturing and welding	Services	4 years	Male
Respondent 2	Cellphone accessories	Products	13	Male
Respondent 3	Manufacturing	Products	6	Male
Respondent 4	E-Commerce	Services	3	Male
Respondent 5	Business support	Services	12	Male
Respondent 6	Clothing retailer	Products	12	Female
Respondent 7	Car accessories	Products	6	Male
Respondent 8	E-Commerce	Services	6	Male
Respondent 9	Mechanic	Services	4	Male
Respondent 10	Locksmith	Services	31	Male
Respondent 11	Beautician	Services	4	Female
Respondent 12	Bookkeeper	Services	3	Male
Respondent 13	Caterer	Services	20	Female
Respondent 14	Real Estate agent (rentals only)	Services	25	Female
Respondent 15	Real Estate agent (rentals only)	Services	24	Female
Respondent 16	Car accessories	Products	4	Female
Respondent 17	Plumber	Services	3	Male

In the study, services represented the main type of business (70%) with the average duration of operations being ten and a half years. Furthermore, the predominant gender was male (65%) with female representing only 35%. The study also involved two industry professional participants. Expert one consulted for the Western Cape Government in e-Government and was selected based on literature used in the study. On the other hand, expert two worked for the Western Cape Government in e-Government and was selected using the snowballing method.

4.8.3 Sample Size

A qualitative study with less than 20 participants assists the researcher to develop and keep a close relationship, improving the open exchange of information (Crouch & McKenzie, 2006). This could also assist with mitigating the bias and validity flaws in qualitative studies

(Galvin, 2015). The study followed the recommendations of Crouch and McKenzie (2006) and Galvin (2015). A heterogeneous sample of 17 semi-structured interviews was used.

4.9 Data Collection Methods

The study used two data collection techniques, namely documentary review and semi-structured interviews. The researcher also explored several e-Government websites during the data collection process. Data for the study was collected between February and March 2017.

4.9.1 Documentary Review

Reviewing documents is one method of understanding a situation (Myers, 2007). Documents could be used in research to understand culture or as historical records of events (Myers, 2013). Numerous types of documents such as textual material, maps and interactive websites could be used (Myers, 2007). The study reviewed documents such as annual reports, published statistics and additional documents linked to e-Government and micro-enterprises to establish the context of these enterprises. Table 4.3 lists some of the documents that were reviewed.

Table 4.3: Summary of documents reviewed for the study.

Document	Description	Source
e-Government Strategy 2012 – 2019	Report on e-Government vision and plan.	Western Cape Government
Provincial Strategic Plan 2014 – 2019	Western Cape Government vision and strategic priorities for the second term of office.	Department of the Premier
Technology, e-Government and Economic Development	Background paper to inform the strategy of the Centre for e-Innovation.	Centre for e-Innovation (Western Cape Government)
Small, Medium and Micro Enterprise Development Report (2015)	Report on statistics and support for SMMEs.	Small Enterprise Development Agency
The Small, Medium and Microenterprise Sector of South Africa (2016)	Statistical overview of Small, Medium and Micro Enterprises of South Africa.	Bureau for Economic Research

4.9.2 Semi-structured Interviews

Interpretive paradigms often rely significantly on natural techniques such as the examination of existing literature and interviewing (Myers & Newman, 2007). Interviews provide a face-to-face communication, and an opportunity to collect data that cannot be collected by other means i.e. surveys (Denzin & Lincoln, 2011). Researchers usually adopt one of the following types of interviews: structured, semi-structured and unstructured interviews (Myers & Newman, 2007). With semi-structured interviews, main questions are organised and it enables the researcher to collect data in an organised manner and ensure that key data is not lost (Gray, 2013). Semi-structured interviews were used to collect data because it enabled the opportunity for immediate response and the opportunity to ask immediate follow-up questions (Benbasat, Goldstein & Mead, 1987).

The interview questionnaire was divided into six main sections, namely list of capabilities (potential functionings), conversion factors for generating a capability set, conversion factors affecting the outcome, the outcome of the ICT commodity (achieved functionings), the outcome of the e-Government commodity (potential achieved functionings) and agency

and well-being. The format allowed for the structuring of the information collected in accordance with the framework and research questions and served as a guideline in assisting the interviewer in covering all the desired topics. The data collection technique also complements the interpretive paradigm, deductive approach and qualitative method of the study (Tanner & du Toit, 2015).

In terms of the interview process, interviews were conducted using a face-to-face communication method which facilitated rather than constrained the flow of information between the interviewer and interviewee. On average, each interview lasted approximately 40 minutes. Notes were also taken during interviews to record key words, phrases, important ideas of participants, etc.

Myers and Newman (2007) identified possible challenges that the researcher should be aware of when conducting interviews: absence of trust, inadequate time, access to the business, participants feeling pressured in terms of time due to interviews, important informants being prejudice on the information they provide, and nativity of the researcher resulting in inconsistencies of data being gathered. The study used certain processes such as a project plan, open-ended questions and an interview procedure to mitigate these challenges:

i. Properly plan interviews to create an environment that enables participants to provide appropriate information eagerly (Myers & Newman, 2007).
ii. Obtain diverse opinions by interviewing numerous micro-enterprises (Rubin & Rubin, 2011).
iii. Apply an interview guide to ensure that detailed answers are generated from questions (Noor, 2008).
iv. Frame questions to encourage participants to provide detailed answers (e.g. experiences, etc.) (DeMarrais, 2004).

The project plan and interview procedure are attached as Appendix B and F.

4.9.3 Pre-testing of the research instrument

A pilot study involving four micro-enterprises was conducted to ensure that the interview questions were properly structured and the data collected was applicable to the study (Gray, 2013). This also mitigated the challenge of misusing time (Yin, 2013).

4.10 Data Analysis Method

Thematic Analysis was used to analyse the data collected for the study. Thematic analysis is a technique used for recognising and analysing patterns of significance and meaning in a data set (Joffe, 2012). Furthermore, the technique "illustrates which themes are essential in the description of the phenomenon under study" (Joffe, 2012, p. 209). Thematic analysis is also beneficial in condensing important attributes of large amounts of data and for producing unexpected insights about the phenomenon (Clarke & Braun, 2013). Thematic analysis enables flexibility and ease of application across an array of theoretical and epistemological approaches such as an interpretive paradigm (Braun & Clarke, 2006). Furthermore, the technique is easy, quick to learn and accessible to inexperienced researchers conducting qualitative studies (Clarke & Braun, 2013). Braun and Clarke (2006) state that thematic analysis involves six steps in the analysis of qualitative data. The six steps are:

i. **Familiarisation with data:** This step involves the act of transcribing data, becoming familiar with the data, and creating meaning rather than writing words on paper.
ii. **Generating initial codes:** The next step involves noting of interesting features and appropriate data that are categorised into important groups.
iii. **Searching for themes:** In this step, different codes are organised into possible themes. Furthermore, the appropriately coded data extracts within the identified themes are organised.
iv. **Reviewing themes:** The next step involves refining of candidate themes, establishing coherent patterns to form a thematic map, and examining if the themes relate with coded extracts.
v. **Defining and naming themes:** In this step, the essence of the theme is identified, and the aspect of data that each theme is about is captured.
vi. **Producing report:** The final step involves a concise, coherent, logical and non-repetitive final analysis with data extracts that demonstrate the commonness of the theme. It also involves making an argument that relates to the research question. Finally, a report is produced.

Thematic analysis was used due to its ease of application to qualitative studies, ability to condense important attributes of large amounts of data and ability to recognise and analyse patterns of significance and meaning in a data set (Clarke & Braun, 2013). The technique was also used due to its ability to describe the themes and produce a report (Braun & Clarke, 2006). Each interview was transcribed into a Microsoft Word document to simplify

the process of analysing the data with the aim of identifying themes. The participant feedback was also transcribed within 24 hours of the interview to mitigate the challenge of data loss.

4.11 Validity and Reliability

The key objective of validity and reliability is to ensure that the research instrument should provide comparable outcomes if used at different periods, and data of the research to be correct and trustworthy (Gray, 2013). The objective of qualitative research is to pursue an understanding of a phenomenon in a particular setting and the researcher's interest is to comprehend and extrapolate to comparable conditions, thus, the emphasis on the trustworthiness of results (Makoza & Chigona, 2012). Therefore, the need to consider validity and reliability in qualitative research when planning, examining and ensuring quality (Patton, 2015).

4.11.1 Validity

In qualitative studies, validity refers to the extent of credibility and accuracy of data in a given study (Patton, 2015). Internal validity focuses on ensuring that repetitive checks for data accuracy and bias in interpretation are maintained during analysis (Whittemore, Chase & Mandle, 2001); whereas external validity focuses on the degree of generalisation established from data in question (Gray, 2013). In qualitative research, validity refers to credibility in contrast to the generalisation of outcomes to a broader population. Therefore, validity conceptualised credibility, accuracy, quality and use of triangulation (Golafshani, 2003).

To ensure internal validity of the study, reflexivity where the researcher's biases and predispositions were noted to avoid influencing the research process and outcomes. The researcher was also involved in the data analysis process to ensure that the themes identified consistently and systematically. Furthermore, low-inference descriptors such as direct quotes were used to support the relevance of the themes. External validity was achieved by carefully documenting the process followed for conducting the study to ensure transferability.

4.11.2 Reliability

Reliability refers to the stability of research results (Denzin & Lincoln, 2011). Reliability considers the technique of collecting data from several sources called triangulation

(Golafshani, 2003). Triangulation is a technique used to ensure reliability (Robson & McCartan, 2016). This is achieved through numerous techniques for gathering data to ensure that data is comprehensive and to ensure that data loss in one method is counterbalanced by the other methods (Robson & McCartan, 2016). Consequently, with the application of triangulation, the results of the study are strengthened (Patton, 2015). Qualitative studies could use four types of triangulation (Makoza, 2011, p. 42):

i. Data triangulation: numerous data gathering approaches are used.
ii. Investigator triangulation: more than one researcher is involved in a specific case.
iii. Multiple triangulations: numerous techniques in a study are used namely theories, data and researchers.
iv. Methodological triangulation: diverse data is collected with the same method (within method) and diverse data gathering methods are used (between methods). An example includes observations and surveys.

The study used data triangulation to strengthen the results. Semi-structured interviews and documentary review were used as a method of data triangulation. Data triangulation was also used to validate details provided by participants during the interviews. The researcher achieved this by triangulating the data with two industry professionals involved in e-Government to improve the confidence in the findings. Through triangulation, predictions of similar and different results between the unit of analysis were made to determine robust and reliable results (Yin, 2013). The researcher also conducted a confirmation method of examining, validating and making sure of the suitability to the study of data gathering plans, study goals and data gathered to ensure the reliability of the study (Golafshani, 2003; Morse et al., 2002).

4.11.3 Generalisation

Generalisation is claims of long-term significance that are free of context and could be naturalistic based on intuition, personal and direct circumstances (Guba & Lincoln, 1994). Generalisation could be examined from both an interpretive and positivistic paradigm (Lee & Baskerville, 2003). In an interpretive paradigm, generalisation plans to create a logical and informative explanation of a phenomenon (Schofield, 2002). In qualitative research, the objective is not a duplication of results in the sense of forming a concept or idea (Schofield, 2002). On the other hand, findings from qualitative research could encourage additional research and provide information on duplication (Makoza & Chigona, 2012). Therefore, in

qualitative research generalisation is established on the suitability of circumstances being researched with regard to the use of ideas and inferences in the study (Bryman, 2015).

Qualitative studies are challenging to duplicate because comparative research might not include similar participants (Saunders, 2011). The key objective is to create research outcomes that could be informative and improve the understanding of the research audience (Myers, 2013). The study used an interpretive position with regard to generalisation. Narratives were used to collect comprehensive opinions, experiences and problems related to the challenges that micro-enterprises experience in accessing support information using e-Government websites. The objective was to discover ideas in the form of descriptions and explanations with regard to the constructs of CA that was adequate to understand the situation of micro-enterprises (Yin, 2013).

4.12 Confidentiality, Ethics and Approval

Research ethics is considered as the use of moral values in preparation, conducting and communicating outcomes of the study (Myers, 2013). Four ethical principles could be used when conducting a study: truthfulness, thoroughness, objectivity and relevance (McNabb, 2002). McNabb (2002) further expanded on the four ethical principles:

i. Truthfulness: Encourages integrity and professionalism, dissuading fraud when performing the study.
ii. Thoroughness: Ensures that the processes in the study are followed systematically.
iii. Objectivity: Dissuades the researcher to allow or use their bias or values to influence the study.
iv. Relevance: Ensures that the research is applicable to the purpose of the study.

The study adhered to these four ethical principles as well as legal issues, namely data protection. Furthermore, the study also ensured the privacy and confidentiality of the participants (Cairns & Cox, 2008). For example, in terms of privacy and data protection, all recordings and transcripts were stored on a secured Vula website and only the researcher and supervisor had access to the website. The study also used pseudonyms (e.g. respondent 11) to protect the identity of the participants in place of real names. The pseudonyms will also be used for any forthcoming publications.

The respondents were informed that their involvement in the study was voluntary and that they may withdraw at any time. This was done in consideration of research ethics. Access for the study was obtained from the project sponsor i.e. the Department of Economic

Development and Tourism to conduct data collection. Furthermore, ethics permission for the study was obtained from the University of Cape Town. The access letter, ethics approval form and interview consent form are attached as Appendix C, H and D. The researcher also adhered to the code of conduct prescribed by the University of Cape Town.

4.13 Summary of chapter

A qualitative research methodology is appropriate to obtain in-depth details on the outcomes (i.e. challenges) of accessing support information using e-Government websites by micro-enterprises. The study employed a qualitative research strategy, supported by multiple data collection techniques to produce data that led to the description of interpretations of the challenges that micro-enterprises experience in accessing support information using e-Government websites and the impact of using ICT.

5. Findings

This chapter presents the key findings and attempts to answer the research question and address the research objectives. The key themes that emerged from the data analysis are summarised and new concepts are noted. The ICT and e-Government commodities were separated for analysis.

5.1 Commodity one: ICT

The micro-enterprises owned and used different ICTs for general business activities. For example, the cellphone accessories micro-enterprise owned a point-of-sale system in addition to a laptop and mobile phone. The point-of-sale system enabled the micro-enterprise to diversify its services by selling airtime vouchers to clients, thereby increasing revenue. Majority of the micro-enterprises used generic and affordable technologies for general business activities. However, the mechanic used specialised software and his laptop to diagnose car issues of newer vehicle models. Furthermore, the locksmith used expensive software to cut specific keys for clients. Table 5.1 summarises the ICTs that the micro-enterprises owned and used for general business activities.

Table 5.1: ICT ownership and use.

ICT	Description	No. of SMMEs
Mobile phone	▪ Communication with clients. ▪ Communication with suppliers. ▪ Searching for information. ▪ Electronic Fund Transfers. ▪ Online marketing. ▪ Mobility.	17
Laptop	▪ Communication with clients. ▪ Invoicing. ▪ Searching for information. ▪ Drafting legal documents. ▪ Diagnosing car issues. ▪ Online marketing. ▪ Website design.	14
Computer	▪ Communication with clients. ▪ Communication with suppliers. ▪ Invoicing. ▪ Searching for information. ▪ Website design.	4
Printer	▪ Printing legal documents. ▪ Printing pamphlets.	2
Point-of-sale	▪ Selling airtime vouchers.	1

The ICTs varied according to the nature of the micro-enterprise. The table shows that mobile phones (17) and laptops (14) were the main ICT devices used by the micro-enterprises for general business activities, especially for information access and communication.

5.1.1 ICT as a capability

Capabilities could effectively be interpreted as potential opportunities (i.e. opportunities from which an individual could select from to achieve the functionings) (Robeyns, 2005b).

Table 5.2 summarises the capabilities that the micro-enterprises interpreted as potential opportunities of using the ICT commodity for general business activities.

Table 5.2: List of capabilities for using ICT.

Themes	Sample of responses
Access to information	*"…most of the time it's the … easiest way to find … [the information that] I'm looking for"* [Respondent 7].
Communication	*"…I [can] use technology such as WhatsApp to communicate with the volume of my clients"* [Respondent 2].
Marketing exposure	*"You can reach more clients in way less time"* [Respondent 4].
Cost-savings	*"It is cheaper cause there's no cost of printing [with using online marketing]. There's no cost of doing the pamphlets and printing it on paper"* [Respondent 11].
Efficiency	*"It will save you time … and it can keep you efficient as well in the sense of your productivity is being scored upon"* [Respondent 9].
Productivity	*"It makes my admin work easier"* [Respondent 2].

Having access and understanding how to use ICT indicate capabilities and transforming these capabilities to marketing products on the Internet (e.g. using social media) would denote a functioning (Nyemba-Mudenda, 2015). The capabilities included access to information, communication, marketing exposure, cost-savings and efficiency and productivity. A micro-enterprise owner mentioned that using ICT made communication easier for her.

> "*…now you can just email all the documents, but before that wasn't available. You had to go and sit with [the clients] and fill it in. So, everything is done via the email now".* [Respondent 15]

> "*It makes accessing information much quicker".* [Respondent 2]

The cellphone accessories owner mentioned that a potential opportunity of using the ICT commodity was that it made access to information quicker.

The beautician said that in terms of marketing exposure, it helped her to improve the brand awareness of her business. *"…with social media it's easier to get the word out there"* [Respondent 11]. The e-Commerce owner mentioned that a potential opportunity of using

the ICT commodity was that it enabled cost-savings. *"I think one benefit is that you can save a lot of cost by using technology. So, it drives down the overheads [of my business]"* [Respondent 4]. Furthermore, the car accessories owner said that using technology "*saves me time and it … helps to improve the efficiency [of my business]*" [Respondent 16]. "*I've got to use technology because I need to do invoices. So, it helps with improving productivity"* [Respondent 13]. The caterer identified that using the ICT commodity helped her improve business productivity.

5.1.2 Conversion factors for ICT commodity

Table 5.3 summarises the conversion factors for generating a capability set and the conversion factor (literacy) that could have affected the outcome of using the ICT commodity. The conversion factors are discussed in the subsequent sub-sections.

Table 5.3: Conversion factors for generating a capability set and the conversion factor that could have affected the outcome of using the ICT commodity.

Type	Themes	Sample of responses
Infrastructure	ICT facilities	*"I … have my own internet at home. I'll access the South African Revenue Service from there, and I'll access the Companies and Intellectual Property Commission service too. So, everything you can basically do from home"* [Respondent 12].
Resources	ICT resources	*"My laptop is … a tool that I use to access any form of information"* [Respondent 10].
Socio-economic	Quality of ICT owned	*"So, my phone helps me do most of the things for my business like call clients, buy materials, look for information, etc. You know a laptop is expensive. We don't always have extra money for stuff like that"* [Respondent 17].
Literacy	ICT literacy skills	*"I received [computer] training from a technical school [college]"* [Respondent 9].

5.1.3 Conversion factors for generating a capability set to use ICT

Infrastructure and resources are types of environmental conversion factors. Infrastructure (ICT facilities) and resources (ICT resources) influenced how the micro-enterprises generated a capability set to use the ICT commodity for general business activities. All of the 17 micro-enterprises had access to internal ICT facilities (mobile phone, laptop or computer) in their businesses that enabled them to use the ICT commodity. Therefore, they did not experience the challenge of having to use shared ICT facilities such as telecentres and internet cafés that could have affected their general business activities. Some of the many ICT challenges that micro-enterprises experience in developing countries are ineffective ICT infrastructure and limited resources e.g. ICT facilities (Jones et al., 2014).

Socio-economic factors identified in this study was mainly about ICT ownership. ICT ownership influenced how the micro-enterprises generated a capability set to use the ICT commodity for general business activities. For example, the plumber used his mobile phone for most of the functions of his business such as communication with clients, purchasing materials and searching for information. His mobile phone served as the main ICT device which he used for his business because he could not afford a laptop. Micro-enterprises experience numerous challenges one of them being limited financial resources, thus, lacking affordability (Makoza & Chigona, 2014). Therefore, the smaller micro-enterprises owned cheaper technology as opposed to the larger micro-enterprises that owned technology that was more expensive.

5.1.4 Conversion factor affecting the outcome of using ICT

Among the micro-enterprises, limited ICT literacy skills could have affected them from using the ICT commodity for general business activities (i.e. the outcome). However, the micro-enterprises had either received computer training from a technical school (college) or were self-taught and could use ICT competently. For example, the locksmith said that *"Any computer training that I got was from … learning and educating myself"* [Respondent 10]. Therefore, the challenge of limited ICT literacy skills was not present.

5.1.5 Outcome (achieved functionings)

The micro-enterprises interpreted several outcomes as achieved results of using the ICT commodity for general business activities. These were improved access to information, improved communication, improved marketing, reduced costs and improved efficiency and productivity.

The micro-enterprises found that using ICT (e.g. the Internet) enabled them to access information such as product and supplier information quicker. *"It has helped me to find [information] that I'm looking for [on the Internet] quicker"* [Respondent 7]. Furthermore, some micro-enterprises used their mobile phones and mobile applications such as WhatsApp to improve their communication with clients. The plumber was able to reconfirm his client's requirements before arriving at his worksite. This enabled him to purchase less or additional material as required. This assisted him with reducing both logistics and inventory costs. The beautician used ICT such as social media platforms (e.g. Facebook and Instagram) to promote her brand and improve marketing of her products.

> *"It has definitely [allowed me to acquire more clients]. So, I post something on social media and one girl is gonna share it on her [Facebook, Twitter, Instagram, etc.] page and ten of her friends are gonna see it, and out of that ten, maybe five is gonna share it and so forth. That is how I've built up my clientele and my name is quite well known … because of that"*. [Respondent 11]

This often led to her acquiring additional clients and expanding her market share. The mechanic mentioned that using ICT enabled him to operate his businesses efficiently and improve his productivity. Table 5.4 summarises the outcome that the micro-enterprises interpreted as achieved results of using the ICT commodity for general business activities.

Table 5.4: List of outcomes identified as achieved results.

Themes	Sample of responses
Improved access to information	*"Yes [being able to access information … has allowed me to achieve some of my business goals]"* [Respondent 15].
Improved communication	*"[With] WhatsApp sometimes you communicate the problems and stuff like that [with your client] and you have first-hand information before you get there [to the client]. Rather than you get to the [worksite], and then you have to drive back again to go and buy the material. So, those … technologies … are … helping us"* [Respondent 17].
Improved marketing	*"Social media platforms have helped build my brand … I allow a forum where my clients can share their experience … thus, opening the [discussion] to clients from all over South Africa. Technology is the reason [that] this can happen"* [Respondent 16].
Reduced costs	*"…that technology has helped us save costs. It saved us a lot of money"* [Respondent 10].
Improved efficiency	*"It has helped me to run my business efficiently"* [Respondent 6].
Improved productivity	*"…it helps me sell faster and it helps me find what I'm looking for…"* [Respondent 7].

The micro-enterprises placed a higher priority on the achieved results such as improved access to information, improved communication and improved marketing, than reduced costs, improved efficiency and improved productivity. This shows the importance that the ICT commodity had on their business activities, especially for information access and communication.

5.2 Commodity two: E-Government

The micro-enterprises mostly attempted to access support information related to business skills development, products and services development and funding (grants and loans) using the e-Government commodity.

5.2.1 E-Government as a capability

Table 5.5 summarises the capabilities that the micro-enterprises interpreted as potential opportunities of accessing support information using the e-Government commodity.

Table 5.5: List of capabilities for accessing e-Government.

Themes	Sample of responses
Accelerate business growth	*"[If I could access support information], I could grow my business. I can have a bigger setup. I could maybe go and do my cosmetic line like I wanted to do, or open a proper salon with equipment and everything"* [Respondent 11].
Improve competitiveness	*"[Accessing support information] would [make] me a possible lead manufacturer of aftermarket car accessories in Cape Town"* [Respondent 16].
Improve business management skills	*"Accessing support information on marketing skills would assist my business i.e. market my products and stuff better"* [Respondent 2].
Additional products and services	*"[If I could access support information], we would add on more of a variety of services that we could render to the public … like closed-circuit television"* [Respondent 10].
Acquire more clientele	*"More people will come to know of [my products] and the more people know of it, [then] the possibility of them requesting it in stores is greater. So, you would definitely get [more clientele]"* [Respondent 3].
Access to new markets	*"[I accessed support information because] I was … looking at opportunities [such as accessing new markets]"* [Respondent 15].

The capabilities included accelerate business growth, improve competitiveness, improve business management skills, additional products and services, acquire more clientele, access to new markets and increase staff employment. The locksmith mentioned that a potential opportunity for accessing support information using the e-Government commodity would be the accelerated growth of his business:

"If we had some form of support in that aspect, then I … think that the five-year plan that we have would probably turn into two years. It will accelerate growth big time by far". [Respondent 10]

"*If I could access it, I could perhaps grow my existing business. I could open [a store] in a good location where I could sell on a bigger scale. At the moment, I'm selling on a small scale from home".* [Respondent 7]

The car accessories owner said that accessing support information using the e-Government commodity could create an opportunity for his business to grow.

The mechanic believed that accessing support information such as funding meant that he could improve the competitiveness of his business by employing additional staff. *"…you'll obviously employ more people as well. You'll look at increasing the employment level"* [Respondent 9]. The home-based manufacturer identified that accessing support information using the e-Government commodity could help him market his products better. "*It's quite important, especially from a marketing perspective*" [Respondent 3]. Business management training related to marketing could improve his knowledge on how to identify the needs of his clients and advertise products that meet their needs.

The clothing retailer said access to support information could enable her to purchase new stock and offer additional products. "*Maybe I can do some changes by bringing in [new] stock that at the moment is not accessible to me because of funding"* [Respondent 6]. The respondents also perceived that access to support information could help them access new markets. *"…if I should have a premises and the funding for it, then I can empower more ladies … which means I can hire more ladies that are at home and want to create an income*" [Respondent 13]. The caterer mentioned that a potential opportunity of accessing support information could be to employ and empower unemployed women.

5.2.2 Conversion factors for e-Government commodity

Table 5.6 summarises the conversion factors for generating a capability set and the conversion factor (e-Government websites) that affected the outcome of accessing the support information using the e-Government commodity. The conversion factors are discussed in the subsequent sub-sections.

Table 5.6: Conversion factors for generating a capability set and the conversion factor that affected the outcome of accessing support information using the e-Government commodity.

Type	Themes	Sample of responses
Institutional factors	Support information	*"[I attempted to access support information related to] business training because remember we have to run the business in a professional way, so the one thing that we … are lacking is how to operate this business [efficiently and effectively]"* [Respondent 17].
Environmental factors	Search engines	*"Google is my main source. Google will take me … to … [the support information] … and then I would see what the most appropriate one for me is. That's how I go about it"* [Respondent 12].
Institutional factors	E-Government websites	*"Finding the proper and relevant [support] information"* [Respondent 3].

5.2.3 Conversion factors for generating a capability set to access e-Government

Support information is a type of institutional conversion factors and search engines are a type of environmental conversion factors. These two factors influenced how the micro-enterprises generated a capability set to access the support information using the e-Government commodity. None of the micro-enterprises could generate capabilities from the e-Government commodity because of the challenges associated with accessing the support information. The challenges included content, structure, design, language availability and red tape. The home-based manufacturer attempted to access support information related to funding (grants and/or loans), but was unsuccessful. "*I [*attempted *to access support information because I] was interested in … getting … [a] grant"* [Respondent 3].

The car accessories owner attempted to access support information related to products and services development *"[I* attempted *to access support information related to] … product training"* and support information on how to access new markets *"[Support information on*

how to] access new markets" [Respondent 16]. A few micro-enterprises such as the e-Commerce owner attempted to access support information related to providing internships (e.g. to unemployed graduates) *"… [I* attempted *to access support information related to] giving interns the ability to gain experience through working with me [in] the business"* [Respondent 8]. This finding was not identified in the literature.

The micro-enterprises could not generate capabilities from the e-Government commodity to improve the competitiveness of their businesses because of the challenges associated with accessing the support information, namely ineffective design such as navigation challenges and poor design of web pages. Consequently, the bookkeeper resorted to accessing support information such as funding using search engines such as Google to improve the competitiveness of his business. "*I Googled entrepreneurship funding and there was quite a few funding under there"* [Respondent 12]. He mentioned that Google made it easier for him to find and access the support information which he required.

5.2.4 Conversion factors affecting the outcome of accessing e-Government

The micro-enterprises experienced several challenges with accessing the support information using the e-Government commodity to improve the competitiveness of their businesses. The challenges included content, structure, design, language availability and red tape.

i. <u>Content challenge</u>

In terms of content, the micro-enterprises found that the support information was outdated, incomplete and irrelevant. For example, both the car accessories owner and the caterer said that it was difficult *"…to find information that is current and not missing anything"* [Respondent 16]; and that the *"…contact details [of the personnel were outdated]"* [Respondent 13]. The expert who worked for the Western Cape Government in e-Government said:

> *"So, there's the problem with … bad and outdated content for the end-user website … A lot of our content we don't know who owns it anymore. So, we got this e-Government portal that has thousands and thousands of pages that haven't been updated in ages. Some websites have content that was last updated in January 2014 …".* [Expert 2]

The support information was also perceived as irrelevant. This demotivated the micro-enterprises from accessing the support information using the e-Government commodity. The welder mentioned:

> "*…finding the [support information] … that you actually need, that's gonna be … [relevant] to you. So, you getting a lot of [support information] that you don't really need".* [Respondent 1]

An expert who consulted for the Western Cape Government in e-Government said: *"Another problem is content. The content is … not relevant to them"* [Expert 1].

Another challenge was that the support information was not structured to meet the needs of businesses at different maturity levels. The same type of support information was provided to both start-up and established businesses. On the one hand, start-up businesses usually require support on how to be sustainable. This information usually involves how to create a business plan, start-up funding, etc. On the other hand, established businesses usually require support on how to grow their businesses. Therefore, information that would be of value to established businesses would usually be more specific. This could include information on business management training such as marketing for acquiring more clients, products and services training such as improve the ability to offer new products and/or services, access to new markets, etc. "*For example, one established business person said to me that he is not interested in [obtaining] finance. He's much more interested in how he can get his clientele. How he can get his customers that he will do business with"* [Expert 1]. Therefore, support information on to how to create a business plan is of little or no value to established businesses.

The micro-enterprises found that most of the support information was aimed at start-up businesses as opposed to established businesses. Therefore, this finding is linked to the point of the support information that was perceived as irrelevant. "*So, [the Western Cape] Government does not offer that [diverse information] … because they don't know what is needed. They just use their own idea. If they knew, then they [would] put that [support information for start-up and established businesses on their] website"* [Expert 1]. The expert consultant concurs with this finding.

ii. <u>Structure challenge</u>

Another challenge was the structure of the support information. The structure was found to be complex and incomprehensible. The home-based manufacturer experienced this

challenge when he attempted to find support information related to grants and loans. *"You had to really look at it closely to understand the fine print involved … You couldn't look at it and say okay, brilliant, here's a … grant available. True [the support information was complex to understand]"* [Respondent 3]. The e-Commerce owner had a similar experience:

> *"I think the challenges were that the information was not very straightforward or very clear on how to apply. When are deadlines? Who's eligible? What type of funding is it? Is it repayable? Is it a grant or is it a loan? Where do you go? Is it only for microbusinesses, is it for start-ups, or is it for medium-size firms? That information is there, but it is stuck in the fine print".* [Respondent 8]

iii. Design challenge

The micro-enterprises found the navigation of the e-Government websites difficult which limited them from accessing the support information. *"It's not easy to navigate"* [Respondent 3]. *"You don't know where to start [using the website once you get there]. It's … organised chaos"* [Respondent 1]. This challenge was attributed to the e-Government websites being designed and organised according to the Departments of the Western Cape Government and not the external users such as micro-enterprises. *"We need a website that is organised in terms of the user and not of the Departments of the Western Cape Government"* [Expert 2].

"In terms of both numbers and reach, mobile telephony is the dominant form of telephony, and micro-enterprise is the dominant form of enterprise in the majority world of developing countries" (Jagun et al., 2008, p. 60). Therefore, the majority of micro-enterprises use mobile telephony for informational purposes (Cáceres et al., 2012). In the study, 14 of the 17 respondents used their laptops and all of them used their mobile phones for general business activities such as searching for information. However, the e-Government websites were not designed to be mobile-friendly which limited the access to support information. This challenge affected the car accessories owner who used her mobile phone as her primary ICT device for browsing the Internet and searching for information. *"I think that the websites should be made mobile-friendly. It should fit the screen of my phone and not just my laptop. That would help a lot, especially since I use my mobile phone more for searching for information"* [Respondent 16]. Both experts concur with this finding:

> "*Our main Western Cape Government portal is not mobile-friendly. So, yes, accessibility in terms of [mobile] device is important too and government in South*

Africa is not doing well on that. The Western Cape Government is doing better now, but still not very well". [Expert 2]

"…do they [Western Cape Government] have a mobile-friendly government website? No, and it's a simple thing, and 99.9% of [micro-enterprises] have mobile phones and smartphones. That means that every entrepreneur has some form of a smartphone. So, that website has to be scalable for smartphones". [Expert 1]

Currently, the Western Cape Government is at the first level of e-Government maturity (Western Cape Government, 2017d). The e-Government maturity challenge was a key reason why the support information was outdated, incomplete, irrelevant, complex, incomprehensible, disorganised and not mobile-friendly; discouraging micro-enterprises from accessing it using the e-Government commodity. *"The Western Cape Government is sitting at the first level of e-Government maturity. The first level of e-Government maturity is displaying information, the second one is interaction and they [Western Cape Government] are not even there. So, [micro-enterprises] cannot interact with them … So, the Western Cape Government did not reach the second level of maturity … to support [micro-enterprises] … appropriately. That's the problem"* [Expert 1]. The expert consultant concurs with this finding.

iv. Language availability challenge

Additional language availability such as isiXhosa was also a challenge that affected some of the micro-enterprises from accessing the support information using the e-Government commodity. For example, the owners who did not speak English as their first language found it difficult to access the support information because the e-Government websites catered only for the English language. One of the owners' said:

"The one thing that I found out is that … it's very difficult for … an isiXhosa speaking person because they [do] not have that website in isiXhosa translation. It was only in English and Afrikaans … if it's not sort of like trilingual because English, Afrikaans and isiXhosa are the predominant languages in the Western Cape, then how do they expect people [to access the support information]?". [Respondent 15]

The expert who worked for the Western Cape Government in e-Government said that this challenge was mostly due to resource constraints such as economic and human resources. *"… from the Provincial Level, our portal use to be in English and Afrikaans and now it's*

[only] English because we simply didn't have the capacity to maintain two language versions [let alone three]" [Expert 2].

v. Red tape challenge

Lastly, all of the micro-enterprises experienced the challenge of red tape that hindered the process of accessing support information such as applications for funding. The e-Commerce micro-enterprise had to complete a 20-page questionnaire to apply for funding just to see if he could qualify. Furthermore, the home-based manufacturer experienced a similar challenge with attempting to access funding using the e-Government commodity.

> *"…I … [was] actually required … to fill out about a 20 [page] questionnaire and submit that to see if I could kinda qualify … for funding".* [Respondent 4]

> *"[The challenge of] having to … go through the whole procedure of the paperwork and red tape … to gain funding".* [Respondent 3]

> "*…another [challenge] is bureaucracy, huge bureaucracy with red tape [that makes the application process difficult for micro-enterprises attempting to access support]".* [Expert 1]

5.2.5 Outcome (potential achieved functionings)

The micro-enterprises interpreted several outcomes as potential achieved results from accessing support information using the e-Government commodity to improve the competitiveness of their businesses. These were accelerated business growth, improved competitiveness, improved business management skills, additional products and services, improved client acquisition, access to new markets and increased staff employment.

The micro-enterprises believed that accessing support information using the e-Government commodity could enable them to achieve their business goals and improve the competitiveness of their businesses. The plumber mentioned that he would use the funding from accessing support information to purchase additional vehicles. This meant he could increase the operational capacity of his business, thereby growing his business *"It will … help me buy more vehicles because I want to buy more vehicles. Normally the business of plumbing, the basic thing that you need is a vehicle and buying equipment"* [Respondent 17]. Another important potential achievement was business management skills training, especially marketing. *"…if I received training on marketing, I could market and sell my*

products better" [Respondent 2]. The cellphone accessories owner mentioned that if he could access support information related to business management skills such as marketing, he could market his products better to his clients, thereby increasing his revenue.

"It would create … [new] services for our business [such as closed-circuit television*]"* [Respondent 10]. The locksmith stated that accessing support information such as funding would enable him to add new services to his business such as closed-circuit television and acquire new clientele from offering the new service. The cellphone accessories owner said that if he could access support information, he would grow his business and expand its operations into new markets *"… [accessing support information] would allow me to open another shop [in a different location] … that could also create more opportunities for employment"* [Respondent 2]. Other micro-enterprises such as the bookkeeper mentioned that if he could access support information related to providing internships to unemployed graduates, he could train and mentor them, thereby indirectly contributing toward mitigating the high unemployment rate in South Africa. Table 5.7 summarises the outcome that the micro-enterprises interpreted as potential achieved results of accessing the support information using the e-Government commodity.

Table 5.7: List of outcomes identified as potential achieved results.

Themes	Sample of responses
Accelerated business growth	*"If I was able to access funding I would be able to scale and move into a premises, [so more business growth, more clientele, more market share, etc.]. These are definitely part of my long-term goals, but I first need to access more capital … in order to get there"* [Respondent 7].
Improved competitiveness	*"The goal that I have is … to be competitive with other established businesses. So, the more funding and training we get, we'll try to [compete] with the other established business"* [Respondent 17]. *"It would help me to maximise profitability in all areas of my business [and be more competitive]"* [Respondent 16].
Improved business management skills	*"So, the more training you get the more knowledge you'll have and the more competent you'll be"* [Respondent 17].
Additional products and services	*"If I could access funding information and get the funding, I could buy more products in bulk at a cheaper price. That means that I would be able to sell more products … I could also look into other services … like cheaper cell phone repairs from a third party service provider"* [Respondent 2].
Improved client acquisition	*"We would bring in a different clientele. So, in the form of security [i.e.* closed-circuit television*], that's the [additional industry] that we would [consider]"* [Respondent 10].
Access to new markets	*"Definitely, new markets"* [Respondent 15].
Increased staff employment	*"…you would be able to contribute more to the economy because … you could employ people … [e.g. unemployed graduates]"* [Respondent 15].

5.3 Agency and well-being

Agency is defined as the freedom to plan and follow an individual's own objectives and interests while the pursuit of an individual's own well-being could be one of the objectives and interests (Zheng & Walsham, 2008). The locksmith, car accessories owner and clothing retailer believed that if they could access support information on funding and skills development to improve the competitiveness of their businesses, it would enable them to

pursue their personal objectives and interests such as access higher education, build a house and improve their standard of living, etc.

> "*Personally, it would give me the opportunity to do the things that I love doing … which is to study, to learn more and to grow [personally]".* [Respondent 10]
>
> *"It would speed up my personal goals. For example, I would like to build my own house".* [Respondent 7]
>
> *"…it will improve my standard of living".* [Respondent 6]

The cellphone accessories owner believed that if he could access support information to improve the competitiveness of his business, it would enable him to achieve his personal objective which was to spend more time with his family and less time on operating his business. *"It would give me more time to spend with my family"* [Respondent 2]. Agency could also include improving the well-being of others (Alexander & Phahlamohlaka, 2006). The caterer believed that if she could access funding, it would give her the freedom to achieve her personal objective which was to empower housewives by training them to cook and cater at small to medium size events. Table 5.8 summarises the agency and well-being that the micro-enterprises interpreted as potential agency and well-being of accessing the support information using the e-Government commodity.

Table 5.8: Potential agency and well-being.

Category	Themes	Sample of responses
Agency	Women empowerment	*"…if I should have a premises and the funding for it, then I can empower more ladies e.g. housewives. [That would be a personal objective for me to empower women by employing and training them in cooking and catering]"* [Respondent 13].
Well-being	Improved standard of living	*"Improve in terms of lifestyle because everyone wants to improve"* [Respondent 17].
Well-being	Improved self-confidence	*"If that [funding] would come into place … it will obviously grant me more self-confidence in terms of I'm capable of doing this [i.e. running my business confidently]"* [Respondent 10].
Well-being	Increased motivation	*"Of course, that is the main goal, you get motivated. The more motivated you get the more [effort] you'll put into [your business]"* [Respondent 17]. *"It will give you a drive, so you will know you will have a backing of [the Western Cape] Government"* [Respondent 12].

The micro-enterprises believed that agency e.g. women empowerment and well-being e.g. improved standard of living, increased self-confidence and increased motivation were equally important as the improved competitiveness of their businesses. This shows the importance that the e-Government commodity could have on the agency of the micro-enterprises such as personal objectives and interests, specifically women empowerment and improved standard of living.

5.4 Summary of chapter

The result from the data analysis shows that the ICT commodity has a positive impact on the general business activities of micro-enterprises. The findings are corroborated with

similar results of past studies on the impact of ICT use for micro-enterprises (Donner & Escobari, 2010; Kamal & Jackson, 2014; Mbuyisa & Leonard, 2017). It emerged that the e-Government commodity could produce a positive impact on the competitiveness of micro-enterprises and their personal agency. However, there are challenges that limit the positive impact of occurring.

6. Discussion and Conclusion

This chapter discusses and summarises the research findings in relation to the research question and objectives. Furthermore, it highlights the implications of literature reviewed and discusses new emerging concepts from the research findings. The limitations and value of the study are also discussed. A conceptual model for future research is presented in this chapter. Lastly, the recommendations for practice and direction for further research are discussed.

6.1 Summary of research objectives

Micro-enterprises like all other businesses may benefit from using e-Government (Praditya & Janssen, 2015). Businesses could learn about new and ongoing government projects and programmes related to business support information using an e-Government portal (Jantjies, 2010). Micro-enterprises could further benefit from using e-Government by reducing the time in setting up a new business (reduced red tape), having a more convenient and clearer method for conducting business with government through e-Procurement, etc. (Makoza, 2011).

The objective of the study was to investigate the challenges that micro-enterprises experience in accessing support information using e-Government websites. The context of the study was the Western Cape, South Africa. Literature indicated that ICT such as e-Government may assist micro-enterprises to be competitive and that there are positive outcomes of using ICT in business activities of micro-enterprises (Kamal & Qureshi, 2009). The research objectives of the study were:

- To describe the challenges that micro-enterprises experience in accessing support information using e-Government websites.
- To analyse the types of support information that micro-enterprises access using e-Government websites.
- To identify the ICT devices that micro-enterprises use to access support information using e-Government websites.

The research objectives are discussed in the subsequent sub-sections.

6.2 ICT devices used to access support information

In the study, the micro-enterprises mostly used mobile phones and laptops for general business activities, especially for information access and communication. This concurs with existing research that micro-enterprises mostly use mobile phones for activities such as information access and communication in relation to alternative forms of communication. This is because of the affordances of mobile phones such as immediate access to and better use of information and speed of communication (i.e. information flow) (Julsrud & Rolan, 2014). There was an expectation that some of the micro-enterprises might have accessed support information using shared ICT facilities such as telecentres and internet cafés. Some of the many ICT challenges that micro-enterprises experience in developing countries are ineffective ICT infrastructure and limited resources e.g. ICT facilities, therefore, the expectation to use shared ICT facilities (Jones et al., 2014). However, this was not the case with the respondents of the study.

Some of the micro-enterprises used mobile phones for information access as opposed to laptops because of the challenge of affordability such as not having the affordability to purchase or lease a laptop. Micro-enterprises experience numerous challenges one of them being limited financial resources, therefore, lacking affordability (Makoza & Chigona, 2014). It emerged that mobility was also an affordance for the micro-enterprises to use their mobile phones. However, there are implications of using a mobile phone as opposed to laptops and computers e.g. limited tasks, website compatibility challenges, security risks, etc. (Donner & Escobari, 2010). Therefore, accessing the support information using mobile phones was not ideal, especially because the e-Government websites were not mobile-friendly.

6.3 Types of support information accessed

The micro-enterprises mostly attempted to access support information related to business skills development, products and services development and funding. According to the theory of information seeking behaviour, individuals seek information to satisfy a knowledge gap or a desired goal (Mai, 2016). This was evident in the information needs that were identified e.g. information on marketing, products and services information and grants and loan information. Table 6.1 summarises the information needs for established micro-enterprises that emerged in the study.

Table 6.1: Summary of information needs for established micro-enterprises.

Support information needs for established micro-enterprises	
Category of information	**Findings in current study**
Business skills development	Marketing information
Products and services development	Products and services information
Funding	Grants and loan information

6.4 Impact of e-Government and support information on micro-enterprises

The findings indicated that if the micro-enterprises were able to access the support information using e-Government websites it could have a positive impact on their businesses in the form of accelerated business growth, improved competitiveness, improved business management skills (especially marketing skills), additional products and services, improved client acquisition, access to new markets and increased staff employment. Businesses such micro-enterprises may benefit from using e-Government (Praditya & Janssen, 2015). Some benefits could include improved compliance with government rules and regulation for operating a business (e.g. licensing and tax filing) (Makoza, 2011). Micro-enterprises such as the plumber would have used funding to purchase additional vehicles which meant he could increase the operational capacity of his business, thereby growing his business.

An indirect impact that e-Government and access to support information could have on micro-enterprises is the opportunity of employing skilled employees such as unemployed graduates. Micro-enterprises experience the challenge of having a high number of unskilled employees in a business usually resulting in low productivity levels (Adams, 2012). In South Africa, micro-enterprises are important because they assist with employment creation (Woodward et al., 2011). Therefore, the opportunity of employing skilled employees such as graduates could be achieved by offering internships. This could contribute to mitigating the high unemployment rate (27, 7%) and stimulate the economy of South Africa (Statistics South Africa, 2016a).

6.5 Challenges of accessing support information

The micro-enterprises experienced several challenges with accessing support information using e-Government websites. These included content, structure and design. In terms of

content, the micro-enterprises found that the support information was outdated and incomplete. Micro-enterprises experience the challenge of access to reliable information (Adams, 2012). Another challenge is incomplete information (Mshenga & Richardson, 2013).

The micro-enterprises perceived the support information as irrelevant. This was because the information was not structured to meet the needs of businesses at different maturity levels i.e. start-up and established businesses. The respondents of the study were established businesses, therefore, requiring support information on how to grow their businesses and be competitive. However, the respondents found that most of the support information was aimed at start-up businesses as opposed to established businesses. *"If they knew, then they [would] put that [support information for start-up and established businesses on their] website"* [Expert 1]. The expert who consulted for the Western Cape Government in e-Government said that the Western Cape Government did not offer diverse support information because they were not aware of what was needed for businesses at different maturity levels. This challenge demotivated the micro-enterprises from accessing the support information using Government websites.

The structure of the support information was perceived as complex and incomprehensible. This challenge limited the home-based manufacturer from accessing support information related to grants and loans. Micro-enterprises experience challenges with information that is disorganised (i.e. structure) (Mshenga & Richardson, 2013). Consequently, many micro-enterprises experience challenges when trying to access, evaluate and apply information in their business activities (Makoza, 2011).

The micro-enterprises found the navigation of the e-Government websites difficult which limited them from accessing the support information. Ineffective design and poor quality of websites could lead to an inaccessibility of information on the Internet (Agangiba & Kabanda, 2016). However, if micro-enterprises were able to find previously inaccessible information using ICTs (e.g. e-Government), it could assist them in acquiring information about licensing, tax filing, grant submission, etc. (Good & Qureshi, 2009). Therefore, this could lead to the improved competitiveness of micro-enterprises.

The e-Government websites were also not designed to be mobile-friendly which limited the access to support information. Majority of micro-enterprises use mobile telephony for informational purposes (Cáceres et al., 2012).

Currently, the Western Cape Government is at the first level of e-Government maturity in which only a few services are offered and usually the web content is static (Western Cape Government, 2017d). The e-Government maturity challenge was a key reason why the support information was outdated, incomplete, irrelevant, complex, incomprehensible, disorganised and not mobile-friendly; discouraging micro-enterprises from accessing it using e-Government websites.

The availability of content in the language of isiXhosa affected some of the micro-enterprises from accessing the support information. The owners who did not speak English as their first language found it difficult to access the support information because the e-Government websites catered only for the English language. A recent survey showed that the language availability of municipal websites in the Western Cape was a challenge, "…with only six municipalities having the option of selecting a local language other than English (which was Afrikaans)" (Department of Economic Development and Tourism, 2015, p. 13). The expert who worked for the Western Cape Government in e-Government further added that two of the main reasons for not providing the content in multiple languages was because of resource constraints such as economic and human resources. *"…we can't even keep abreast with English right now with the resources that we have … funding [and] human resources"* [Expert 2]. Grönlund (2011) note language barriers and literacy levels as challenges that limit the accessibility of e-Government services.

The challenge of language availability could be excluding a number of businesses from accessing the content because of the language which they could not interpret. This could be seen as a contradiction of the Constitution of South Africa that makes it necessary for the government to provide inclusive access to government information (Matavire et al., 2010). The challenge of language availability could also be perceived as giving privilege to one group of people over another, especially since the predominant language spoken in the Western Cape is Afrikaans, with English and isiXhosa being the additional leading languages (Western Cape Government, 2018b). Therefore, this could limit the efficacy of the Batho Pele (people first) government framework for equal access to effective public service delivery (Twinomurinzi & Visser, 2009). It is equally important to ensure that forms such as application forms used for the support information are also provided in multiple languages and not just the information, thereby increasing the throughput of businesses such as micro-enterprises accessing the support information.

The challenge of red tape hindered the process of accessing support information such as applications for funding. The e-Commerce micro-enterprise had to complete a 20-page

questionnaire to apply for funding just to see if he could qualify. "…one of the biggest hindrances to the growth of entrepreneurs is the many regulatory obstacles to doing business in South Africa. Red tape is also cited as the reason why early-stage entrepreneurial activity has decreased in the country" (State of the Province Address, 2014). Kyobe (2009) concurs by explaining that in South Africa, it is challenging for SMMEs to comply with the regulation.

> "*There are some bottlenecks [i.e. red tape] in the way that they operate – the government … the bottlenecks [are] frustrating. So, you end up not getting help. So, if you do something that can profit you [i.e. access support information such as funding] you'll continue to [use the service i.e. G2B], but now you [realise] that there is more profit to go to a client, whereby you get an income than wasting time and money [on accessing support information due to the red tape]. Then at the end of the day, you are told [by the Government] that we can't assist you. You get frustrated [because] you want to grow the business, especially because the growth of the business … means more employment coming in. So, there's also now the [opportunity to reduce] unemployment".* [Respondent 17]

After experiencing the challenges of accessing support information using Government websites, the micro-enterprises also had to deal with the challenge of mainstream government, namely red tape. This could further demotivate the micro-enterprises from accessing the support information using Government websites.

6.6 Emerging concepts

The study followed deductive reasoning (recall Chapter 4). It was guided by the CA framework where themes were identified to confirm the constructs of the framework. However, the following emerged as new concepts from the data analysis.

6.6.1 Commodities identified in the study

It emerged that the micro-enterprises had an appreciation for technology and were able to gain several benefits of using the ICT commodity. These included improved access to information, improved communication, improved marketing, reduced costs and improved efficiency and productivity.

The findings also show that the micro-enterprises did not experience challenges such as limited ICT literacy with using the ICT commodity. Limited ICT literacy skills are one of the

challenges that micro-enterprises experience in developing countries (Makoza, 2011). However, all of the 17 respondents could competently use their ICT devices for general business activities.

It was noted that the micro-enterprises experienced challenges only when they attempted to access the e-Government commodity. These challenges limited the micro-enterprises of deriving benefits from the support information. A detailed summary of the e-Government challenges are discussed in sub-section (6.5). By separating the ICT and e-Government commodities for analysis, the study was able to identify and show where the accessibility problem emanates from. Therefore, the problem is not necessary always technology, as the micro-enterprises could competently use technology such as the ICT commodity for general businesses activities, rather the problem was the e-Government commodity.

6.6.2 Personal agency of micro-enterprises

It emerged that the access to support information could have a positive impact on the personal agency of micro-enterprises such as personal objectives and interests. The caterer believed that if she could access funding, it would give her the freedom to achieve her personal objective which was to empower housewives by training them to cook and cater at small to medium size events. “The Small Enterprise Development Agency noted that 72% of micro-enterprises and 40% of small enterprises are currently owned by women” (Small Enterprise Development Agency, 2014, p. 6). An important role of micro-enterprises is their ability to empower people through microbusiness activities such as entrepreneurship for women which contributes toward improving gender equality (Kotelnikov, 2014). Furthermore, the locksmith believed that if he could access support information to improve the competitiveness of his business, it would provide him with the freedom to pursue his personal interest which was to access higher education, specifically business management studies.

Freedoms denote decisions and actions taken by individuals with regard to their personal lives in a particular circumstance (Robeyns, 2003). For example, individuals have the freedoms or valued opportunities to live the type of life they would like to live, to do what they would like to do and be the individual they would like to be (Nyemba-Mudenda, 2015). Therefore, access to support information using the e-Government commodity such as G2B could be instrumental in developing the personal agency of micro-enterprises.

6.7 Limitations of the study

The limitations and challenges of the study included sample and location, trust of respondents, voluntary involvement, time constraints and framework limitations. The challenges are summarised as follows:

The sample of the study did not include micro-enterprises from rural areas in the Western Cape. Usually support information for small business is not available and/or accessible in some areas, specifically rural areas (Makoza, 2011). There is also an absence of awareness and deficiency of education such as ICT literacy mainly for entrepreneurs residing in rural areas (Liedholm & Mead, 2013). “Information literacy constitutes one set of personal, social, and environmental conversion factors which lead to the capability … of people in exploiting information to advance their goals” (Zheng & Walsham, 2008, p. 232). However, if the sample had also focused on less urbanised areas it could have produced a comprehensive outcome.

The researcher experienced challenges of trust with the respondents when gathering data. Most micro-enterprises usually do not maintain business records and are often unregistered (Williams et al., 2017). Some of the respondents were cautious about disclosing information related to the activities of their businesses. However, the challenge of trust was mitigated by explaining the objectives of the study to participants, so that the respondents did not feel apprehensive or exposed.

The respondents were informed that their involvement in the study was voluntary and that they may withdraw at any time. This was done in consideration of research ethics. Initially, the researcher experienced challenges in acquiring participants who were willing to participate in the study, but resolved this challenge by employing the snowballing technique. The sample was skewed toward male respondents (65%) with female respondents representing 35%. The majority of the female micro-enterprises that were approached did not volunteer to participate.

Time constraint was another factor that was identified as a challenge. To mitigate this challenge proper planning of interviews and the use of an organised interview procedure was used (Appendix F). This ensured that the business activities of the micro-enterprises were not significantly impacted and that the participants could fully partake in the interviews. A pilot study was also conducted to ensure that the interview questions were properly structured and the data collected was applicable to the study; mitigating the challenge of

misusing time (Gray, 2013; Yin, 2013). The project plan outlined in Appendix B was strictly followed to further ensure that time was managed properly.

Although CA has been broadly cited in ICT research, its application is limited due to the complexity in using it methodically and because of the absence of technology in Sen's writings (Zheng & Walsham, 2008). Furthermore, Sen did not provide guidelines on how to apply the framework making it difficult to apply (Hatakka & De, 2011). However, other authors argue that the criticism around CA is a consequence of misunderstanding it (Comim, 2001; Robeyns, 2003). To mitigate these challenges, the researcher separated the research problem into two commodities to simplify the analysis and improve the understanding of the research problem.

6.8 Potential value of the study

Previous studies on the impact of ICT use in South Africa have largely focused on SMEs in areas of productivity and formalisation (Makoza, 2011). Micro-enterprises have received marginal attention in Information Systems research (Qureshi, 2016). The G2B category has also received limited attention from current literature involving e-Government (Shambour, 2012). The predominant focus has mostly been citizen-focused i.e. G2C (Zaidi et al., 2012). Other studies have also attempted to evaluate this challenge as one problem (Good & Qureshi, 2009; Matavire et al., 2010; Qureshi et al., 2010; Odat, 2012; Tashtoush et al., 2016; Wolcott et al., 2008). Consequently, they have struggled to understand what the real problem is. However, by separating the problem into two commodities there is an opportunity to provide new understanding of this problem. The research results will also be shared with the Western Cape Government, specifically the Department of Economic Development and Tourism to support the growth of entrepreneurship in the Western Cape. The conceptual model for future research is presented in the subsequent sub-section.

Figure 6.1 illustrates the conceptual model that could be used for further research. The model displays the relationships between micro-enterprises and the ICT and e-Government commodities. These three elements could be used for consideration of accessibility and impact assessment of e-Government such as support information.

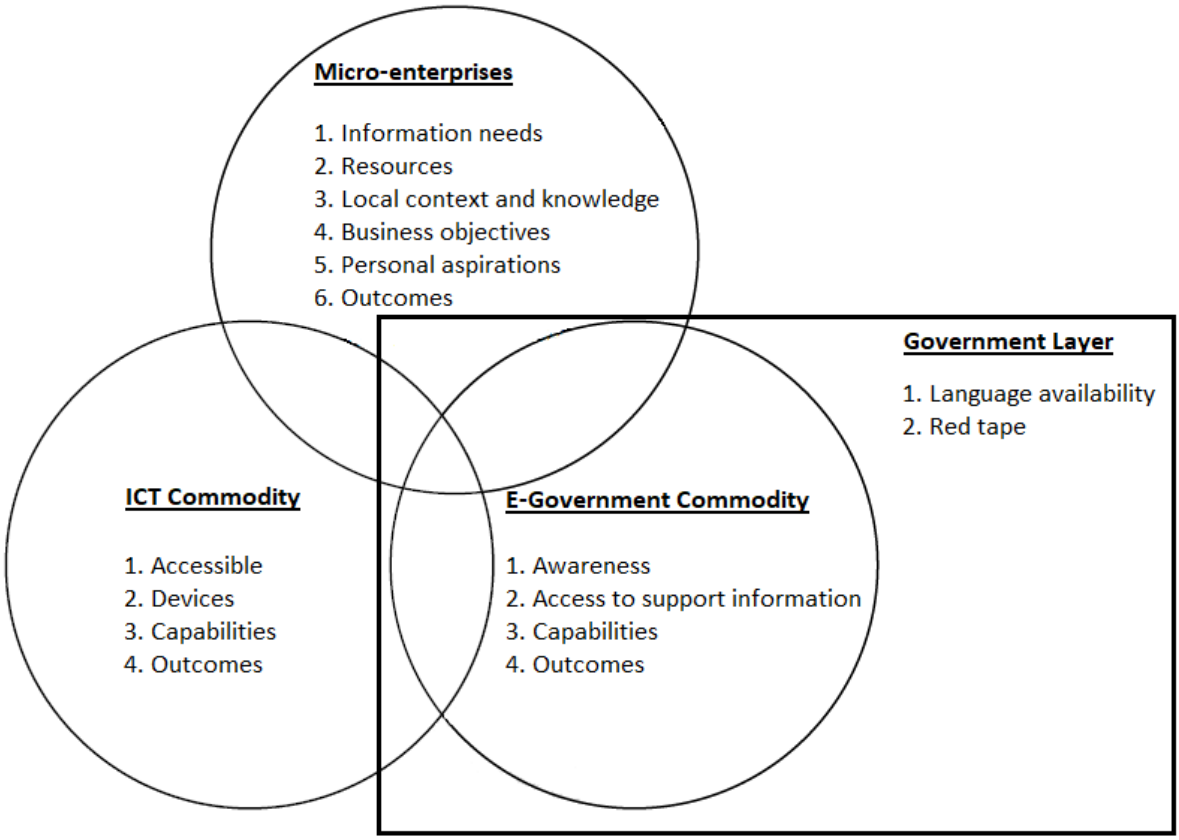


Figure 6.1: Conceptual model for further research adapted from Makoza (2011).

The proposed conceptual model provides an opportunity for researchers to understand users such as micro-enterprises of G2B projects. This is important so that suitable recommendation on the next course of actions be proposed to relevant stakeholders of future G2B projects. The model is regarded as a contribution in applying the accessibility concept in the G2B environment. Furthermore, the model could be used to provide a more holistic view and deeper understanding of how SMEs such as micro-enterprises interact with the e-Government commodity, the capabilities that could be generated from accessing the commodity and the potential outcomes thereof i.e. business objectives and personal agency. The model could also serve as a basis for future research to investigate the phenomenon of e-Government accessibility in relation to the broader context of SMEs in developing countries.

6.9 Recommendations for practice

The following are recommendations for the improvement of e-Government accessibility, specifically G2B in the Western Cape:

There is a need for the content of the support information to be up-to-date and complete, especially for micro-enterprises. Majority of the sample indicated that the support information was outdated and incomplete which discouraged them from accessing it. *"I think there needs to be a very strong political mandate [policy] about this is what will be published and [your department] will keep it up-to-date. The default position is that the information belongs to the public and should be published"* [Expert 2]. Up-to-date and complete support information could improve the throughput of micro-enterprises accessing the content.

There is also a need for the content to be relevant for established businesses. *"It matches your skills training finding [i.e. business management skills]. It's not just about accessing websites, it's also about [providing them with relevant support information i.e.] how [to] manage a business"* [Expert 1]. "…established micro-enterprises have considerable longevity … In this respect, government could explore avenues for assisting [established] businesses, e.g. providing training … to gain specific skills" [Charman, 2016, p. 4]. Therefore, providing diverse support information that meets the needs of businesses at different maturity levels i.e. start-up and established businesses could encourage established businesses to access support information with the aim of improving the competitiveness of their businesses.

There is also a need for the structure of the support information to be simplified i.e. clearer and easier to comprehend. The micro-enterprises often experienced that the support information was too complex and incomprehensible which limited them from accessing it. "*It needs to be easier to understand"* [Respondent 2]; *"More simple to understand"* [Respondent 17]. By ensuring that the support information is clearer and easier to comprehend, micro-enterprises could improve their ability to access, evaluate and apply the support information in their business activities (Makoza, 2011).

Another recommendation is to develop a centralised and inclusive G2B portal that could contain and provide all of the support information – similarly to an "SME Solutions Centre". *"You either hear from people about this particular grant or fund, but there's no real central … portal for that type of information. I think that's an issue*" [Respondent 8]. An e-Government portal, specifically focusing on G2B could further improve the accessibility of support information for micro-enterprises and SMEs at large. *"We need a website that is organised in terms of the user and not of the Departments of the Western Cape Government"* [Expert 2]. A centralised G2B portal could be developed and organised according to the user e.g. businesses such as micro-enterprises and not the Departments

of the Western Cape Government. This could improve the access and navigation of the support information.

It emerged that there is a need to design the e-Government websites to be mobile-friendly thus, improving the accessibility of the support information. "*As a … businessman, I want a website that can scale nicely for mobile use*" [Expert 1]. This would be beneficial for micro-enterprises because the majority of micro-enterprises use mobile telephony for informational purposes (Cáceres et al., 2012). Therefore, a mobile-friendly design could mitigate one of the challenges of not being able to access the support information.

It was noted that language availability such as isiXhosa could be excluding a number of businesses from accessing the support information. *"…include more languages. The [G2B portal] … should have a little click thing where it says translate into isiXhosa, isiZulu or whatever, so the person can understand what he or she is doing"* [Respondent 15]. Therefore, providing additional language availability could increase the throughput of micro-enterprises accessing the support information that were unable to access it previously due to the lack of language availability. This could also have a favourable outcome for their businesses in terms of improving their competitiveness. However, as previously mentioned, it is equally important to ensure that forms such as application forms used for the support information are also provided in multiple languages and not just the support information.

Finally, a pertinent need arises for the Western Cape Government to reduce the amount of red tape involved in accessing the support information, especially with applications such as funding.

> *"So, [to reduce the red tape involved and simplify the process of accessing support information we should look at] what is the user journey of [a] micro-enterprise? What is his/her experience and not what [support information] can we throw at him/her like give [him/her] this [irrelevant] form? What [support information] does he/she need? What are the stages of [his/her] process? Maybe that is not filling out a 20-page form. Maybe that's a sub-process that does the first five pages that actually qualifies him/her to go to the second round, but gives [him/her] assistance in the interim".* [Expert 2]

Businesses such as micro-enterprises are usually resource constrained in terms of human capital and time. Accessing support information to improve the competitiveness of a business should not be further limited by unnecessary red tape. Therefore, red tape should

be reduced to a minimum to encourage and improve the throughput of micro-enterprises accessing support information.

6.10 Suggestions for future research

The objective of the study was to investigate the challenges that micro-enterprises experience in accessing support information using e-Government websites. From the findings, future research could be focused on the following suggestions:

More attention on G2B: The G2B category has received limited attention from current literature involving e-Government (Shambour, 2012). Governments allocate a significant amount of their e-Government budgets on services for citizens, therefore, the predominant focus in the web-domain has mostly been citizen-focused i.e. G2C (Zaidi et al., 2012). However, businesses power an economy and directly communicate with all levels of government on a day-to-day basis (Reddick & Roy, 2013). Projects involving G2B could act as a catalyst to streamline and effectively manage a government's communication with businesses (Joseph, 2009). Therefore, future studies could explore how the G2B category could yield results for businesses, if it is developed in a manner that is accessible, especially for micro-enterprises.

Language availability: Micro-enterprises usually rely on intermediaries to supply access to ICT facilities such as information centre services, government information centres and Non-Governmental Organisations (NGOs), etc. (Duncombe & Heeks, 2002). Services supplied by intermediaries usually include computer training, internet, business support, etc. (Parkinson & Ramirez, 2006). Intermediaries are important in ensuring that micro-enterprises are informed and made aware of the advantages of using ICT in their business operations and of the support information and services that are available to them (Mpofu et al., 2013). Furthermore, intermediaries are usually aware of the existing indigenous knowledge and information that is relevant to SMEs such as micro-enterprises (Mugo, 2012). Therefore, future studies could explore the efficacy of crowdsourcing information translation to various vendors such as NGOs on behalf of the government. Vendors could translate and package support information to meet the information requirements of businesses such as micro-enterprises.

Red tape: Literature indicates that registration has a positive effect on the performance of micro-enterprises (Masakure et al., 2009). Registration enables micro-enterprises to achieve recognition and gain the advantages of access to support, licensing and taxation incentives (Williams et al., 2017). Furthermore, if the provision of support information was

simple and effective for SMEs such as micro-enterprises to access, there could be less burden placed on government resources. Therefore, future studies could explore methods of using e-Government to streamline and reduce the challenge of red tape.

6.11 Final summary

The study has reported on the investigation of the challenges that micro-enterprises experience in accessing support information on e-Government websites. The study focused on the Western Cape of South Africa where micro-enterprises play an important role in income generation, employment, skills development, empowerment and sustainability, especially in marginalised communities. The study has demonstrated that accessing support information could produce a positive impact on the competitiveness and personal agency of micro-enterprises. However, for e-Government such as the G2B commodity to be effective for micro-enterprises, it is essential that the challenges surrounding the accessibility of the support information using e-Government websites are mitigated to facilitate the improvement of the competitiveness and development of the personal agency of micro-enterprises.

Bibliography

Abor, J., & Quartey, P. (2010). Issues in SME development in Ghana and South Africa. *International Research Journal of Finance and Economics*, *39*(6), 215-228.

Adams, F. (2012). *Small Medium & Micro Enterprises: Departments Trade & Industry, Economic Development, Small Enterprise Finance Agency initiatives*. Retrieved from https://pmg.org.za/committee-meeting/15288/

Adeola-Omole, O. S. (2013). An empirical investigation of telephony impact on business performance and regional development: Evidence from small businesses in Nigeria.

Agangiba, M., & Kabanda, S. (2016). E-Government Accessibility Research Trends in Developing Countries. In *Proceedings of the Mediterranean Conference on Information Systems* (p. 8).

Aker, J. C., & Mbiti, I. M. (2010). Mobile phones and economic development in Africa. *The Journal of Economic Perspectives, 24*(3), 207-232.

Alampay, E. (2006a). Analysing Socio-Demographic Differences in the Access & Use of ICTs in the Philippines Using the Capability Approach. *The Electronic Journal of Information Systems in Developing Countries*, *27*(1), 1-39.

Alampay, E. (2006b). Beyond access to ICTs: Measuring capabilities in the information society. *International Journal of Education and Development using ICT*, *2*(3), 4-22.

Alawneh, A., Al-Refai, H., & Batiha, K. (2013). Measuring user satisfaction from e-Government services: Lessons from Jordan. *Government Information Quarterly, 30*(3), 277-288.

Al-Khalifa, H. S. (2012). The accessibility of Saudi Arabia government Web sites: An exploratory study. *Universal Access in the Information Society*, *11*(2), 201-210.

Alexander, P. M., & Phahlamohlaka, L. J. (2006). Amartya Sen's Capability Approach applied to Information Systems research: Reviewed article. *South African Computer Journal*, (37), 1-11.

Alfreds, D. (2016). *Western Cape boasts SA's highest internet usage*. Retrieved from http://www.fin24.com/Tech/News/western-cape-boasts-sas-highest-internet-usage-20160208

Almarabeh, T., & AbuAli, A. (2010). A general framework for e-government: Definition maturity challenges, opportunities, and success. *European Journal of Scientific Research*, *39*(1), 29-42.

Anfara, V. A., & Mertz, N. T. (2014). *Theoretical frameworks in qualitative research.* London, UK: Sage Publications.

Arko-Achemfuor, A. (2012). Financing Small, Medium and Micro Enterprises (SMMEs) in rural South Africa: An exploratory study of stokvels in the nailed local municipality, North West Province. *Journal of Social Anthropology*, *3*(2), 127-133.

Azmi, A. A. C., & Kamarulzaman, Y. (2010). Adoption of tax e-filing: A conceptual paper. *African Journal of Business Management, 4*(5), 599-603.

Bal, M., Biricik, C. G., & Sari, A. (2015). Dissemination of Information Communication Technologies: Mobile Government Practices in Developing States. *International Journal of Communications, Network and System Sciences*, *8*(13), 543-551.

Benbasat, I., Goldstein, D., & Mead, M. (1987). The case research strategy in studies of information systems*. MIS Quarterly, 11(3),* 369-386.

Berry, A., von Blottnitz, M., Cassim, R., Kesper, A., Rajaratnam, B., & van Seventer, D. E. (2002). The economics of SMMES in South Africa. *Trade and Industrial Policy Strategies, Johannesburg, South Africa*.

Bickman, L., & Rog, D. J. (2008). *The Sage handbook of applied social research methods*. London, UK: Sage Publications.

Biernacki, P., & Waldorf, D. (1981). Snowball sampling: Problems and techniques of chain referral sampling. *Sociological Methods & Research*, *10*(2), 141-163.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101.

Bryman, A. (2015). *Social research methods*. London, UK: Oxford University Press.

Burney, S. M. (2012). *Inductive and deductive research approach*. New York, NY: John Wiley & Sons.

Bwalya, K. J., Du Plessis, T., & Rensleigh, C. (2013). *Multi-Dimensional Factors Impacting on E-Government Adoption in Botswana, Mozambique, and Malawi*. London, UK: Oxford University Press.

Bwalya, K., & Healy, M. (2010). Harnessing e-Government adoption in the SADC region: A conceptual underpinning. *Electronic Journal of e-Government, 8*(1), 23-32.

Bureau for Economic Research. (2016b). *Economic Forecast Research.* Retrieved from https://www.ber.ac.za/BER%20Documents/Economic-Prospects/?doctypeid=1059

Bureau for Economic Research. (2016a). *The Small, Medium and Microenterprise Sector of South Africa.* Retrieved from

http://www.seda.org.za/Publications/Publications/The%20Small,%20Medium%20and%20Micro%20Enterprise%20Sector%20of%20South%20Africa%20Commissioned%20by%20Seda.pdf

Cáceres, R. B., Agüero, A., Cavero, M., & Huaroto, C. (2012). The Impacts of the Use of Mobile Telephone Technology on the Productivity of Micro-and Small Enterprises: An Exploratory Study into the Carpentry and Cabinet-Making Sector in Villa El Salvador. *Information Technologies & International Development, 8*(4), 77-94.

Cairns, P., & Cox, A. L. (2008). *Research methods for human-computer interaction*. New York, NY: Cambridge University Press.

Campbell, D. T., & Stanley, J. C. (2015). *Experimental and quasi-experimental designs for research*. New York, NY: Ravenio Books.

Chacko, J., & Harris, G. (2006). Information and Communication Technology and Small, Medium and Micro Enterprise in Asia-Pacific – Sizes Does Matter. *Information Technology for Development, 12*(2), 75 -177.

Charman, A. (2016). *The South African Township Economy and Informal Micro-Enterprises: What are the prospects for youth employment and entrepreneurship?*. Development Policy Research Unit, World Bank Group.

Chew, H. E., Ilavarasan, P. V., & Levy, M. R. (2015). The amplification effect of mobile phones on female-owned microenterprises. *Mobile Media & Communication*, *3*(3), 317-334.

Carmody, P. (2012). The informationalization of poverty in Africa? Mobile phones and economic structure. *Information Technologies & International Development*, *8*(3), 1-18.

Chigona, W., Lekwane, O., Westcott, K., & Chigona, A. (2011). Uses, Benefits and Challenges of Public Access Points in the Face of Growth of Mobile Technology. *Electronic Journal of Information Systems in Developing Countries, 49*(5), 1-14.

Clarke, V., & Braun, V. (2013). Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. *The Psychologist*, *26*(2), 120-123.

Cloete, F. (2012). E-government lessons from South Africa 2001-2011: Institutions, state of progress and measurement: Section II: Country perspectives on e-government emergence. *The African Journal of Information and Communication*, *20(*12), 128-142.

Cohen, L., Manion, L., & Morrison, K. (2013). *Research methods in education*. London, UK: Routledge.

Collis, J., & Hussey, R. (2013). *Business research: A practical guide for undergraduate and postgraduate students*. New York, NY: Palgrave Macmillan.

Comim, F. (2001). Operationalizing Sen's capability approach. In *Proceedings of the Justice and Poverty: Examining Sen's Capability Approach Conference*. Cambridge, England.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. London, UK: Sage Publications.

Creswell, J. W., & Clark, V. L. P. (2007). *Designing and conducting mixed methods research*. London, UK: Sage Publications.

Crouch, M., & McKenzie, H. (2006). The logic of small samples in interview-based qualitative research. *Social Science Information, 45*(4), 483-499.

Dasuki, S. I., Abbott, P., & Azerikatoa, D. (2014). ICT and empowerment to participate: A capability approach. *Information Development, 30*(4), 321-331.

Deen-Swarray, M., Moyo, M., & Stork, C. (2013). ICT access and usage among informal businesses in Africa. *Digital Policy, Regulation and Governance, 15*(5), 52-68.

DeMarrais, K. (2004). Qualitative interview studies: Learning through experience. *Foundations for research: Methods of inquiry in education and the social sciences*, *1*(1), 51-68.

Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE handbook of qualitative research*. London, UK: Sage Publications.

Department of Basic Education. (2012). *General Household Survey (GHS) 2012 Report: Focus on Schooling*. Retrieved from http://www.education.gov.za/Portals/0/Documents/Reports/GHS%202012.pdf?ver=2015-02-01-141814-073

Department of Economic Development and Tourism. (2015). *Western Cape Digital Readiness Assessment 2015*. Retrieved from https://www.westerncape.gov.za/assets/departments/economic-development-tourism/digital_readiness_full_report.pdf

Donner, J., & Escobari, M. X. (2010). A review of evidence on mobile use by micro and small enterprises in developing countries. *Journal of International Development*, *22*(5), 641-658.

Duncombe, R. (2006). Using the Livelihood Framework to analyze ICT applications for Poverty Reduction through Microenterprise. *Information Technologies and International Development*, *3*(3), 81-100.

Duncombe, R., & Heeks, R. (2002). Enterprise across the Digital divide: Information Systems and rural microenterprise in Botswana. *Journal of International Development, 14*(1), 61-74.

Duncombe, R., & Heeks, R. (2005). *Information and Communication Technologies (ICTs), poverty reduction and Micro, Small and Medium-scale Enterprises (MSMEs).* IDPM, University of Manchester, UK.

Dwivedi, Y. K., Weerakkody, V., & Janssen, M. (2012). Moving towards maturity: Challenges to successful e-government implementation and diffusion. *ACM SIGMIS Database*, *42*(4), 11-22.

e-Government Strategy. (2012). Retrieved from https://www.westerncape.gov.za/text/2012/10/wcg-draft-e-government-strategy-for-public-comment-october-2012.pdf

Ellis, F. (2000). *Rural livelihoods and diversity in developing countries*. London, UK: Oxford University Press.

Ertmer, P. A., & Newby, T. J. (1993). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance Improvement Quarterly, 6*(4), 50-72.

Evans, D., & Yen, D. C. (2006). E-Government: Evolving relationship of citizens and government, domestic, and international development. *Government Information Quarterly*, *23*(2), 207-235.

Fatoki, O. (2012). An investigation into the financial management practices of new micro-enterprises in South Africa. *Journal of Social Science*, *33*(2), 179-188.

Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction*. New York, NY: Longman Publishing.

Galvin, R. (2015). How many interviews are enough? Do qualitative interviews in building energy consumption research produce reliable knowledge?. *Journal of Building Engineering*, 1, 2-12.

Glass, G. V., & Hopkins, K. D. (1984). *Statistical Methods in Education and Psychology (2nd ed.)*. Englewood Cliffs, NJ: Prentice-Hall.

Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The Qualitative Report*, *8*(4), 597-606.

Goldkuhl, G. (2012). Pragmatism vs interpretivism in qualitative information systems research. *European Journal of Information Systems*, *21*(2), 135-146.

Gomez, R. (2013). The Changing Field of ICTD: Growth and maturation of the field, 2000-2010. *The Electronic Journal of Information Systems in Developing Countries*, *58*(1), 1-21.

Gomez, S. E. (2015). *Compare and contrast the extent of content compliance in public performance audit reports published in South Africa and Australia* (Doctoral dissertation, University of Witwatersrand).

Good, T., & Qureshi, S. (2009). Investigating the effects of micro-enterprise access and use of ICTs through a capability lens: Implications for global development. In *Proceedings of the 2nd Annual SIG Global Development Workshop, December* (Vol. 14).

Gray, D. E. (2013). *Doing research in the real world*. London, UK: Sage Publications.

Grönlund, Å. (2011). Connecting egovernment to real government-the failure of the UN eparticipation index. In *International Conference on Electronic Government* (pp. 26-37). Berlin, Heidelberg: Springer.

Grünbaum, N. N. (2007). Identification of ambiguity in the case study research typology: What is a unit of analysis?. *Qualitative Market Research: An international journal*, *10*(1), 78-97.

Grunfeld, H., Hak, S., & Pin, T. (2011). Understanding benefits realisation of iREACH from a capability approach perspective. *Ethics and Information Technology*, *13*(2), 151-172.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of Qualitative Research*, *2*(105), 163-194.

Hatakka, M., & De, R. (2011). Development, capabilities and technology: An evaluative framework. In *IFIP WG9. 4: 11th International Conference on Social Implications of Computers in Developing Countries.*

Hegarty, K., Gunn, J., Chondros, P., & Small, R. (2004). Association between depression and abuse by partners of women attending general practice: Descriptive, cross sectional survey. *British Medical Journal, 328*(7440), 621-624.

Huang, Z., & Benyoucef, M. (2014). Usability and credibility of e-government websites. *Government Information Quarterly*, *31*(4), 584-595.

International Organisation for Standardisation. (2010). *Accessibility*. Retrieved from https://www.iso.org/sites/WSC_Accessibility_2010/index.html

Jagun, A., Heeks, R., & Whalley, J. (2008). The impact of mobile telephony on developing country micro-enterprise: A Nigerian case study. *Information Technologies & International Development, 4*(4), 47-65.

Jantjies, S. O. (2010). *An evaluation of e-government within the Provincial Government Western Cape (PGWC)* (Masters dissertation, University of Stellenbosch).

Jere, M., Jere, A., & Aspeling, J. (2015). A study of small, medium, and microsized enterprise (SMME) business owner and stakeholder perceptions of barriers and enablers in the South African retail sector. *Journal of Governance and Regulation*, *4*(4), 620-630.

Jones, P., Simmons, G., Packham, G., Beynon-Davies, P., & Pickernell, D. (2014). An exploration of the attitudes and strategic responses of sole-proprietor micro-enterprises in adopting information and communication technology. *International Small Business Journal*, *32*(3), 285-306.

Julsrud, T. E., & Rolan, M. D. G. Z. (2014). Mobile phones and business networks among Malaysian micro and small enterprises: A comparative network approach. *Asia-Pacific Social Science Review, 14*(1), 21-42.

Joffe, H. (2012). Thematic analysis. *Qualitative research methods in mental health and psychotherapy: A guide for students and practitioners, 1*, 210-223.

Joseph, R. C. (2009). Government-to-Business (G2B) perspectives in E-government. *Northeast Decision Sciences Institute Proceedings* (pp. 192-199).

Kaisara, G., & Pather, S. (2011). The e-Government evaluation challenge: A South African Batho Pele-aligned service quality approach. *Government Information Quarterly, 28*(2), 211-221.

Kamal, M., & Qureshi, S. (2009). Sustaining the Growth of Micro-enterprise that adopt Information and Communication Technologies. In *Proceedings of the Annual SIG GlobeDev Workshop.* Phoenix, USA.

Kamal, M., & Jackson, J. (2014). ICTs in Micro-enterprises: Does it make a difference?. In *Proceedings of the Twentieth Americas Conference on Information Systems.* Savannah, USA.

Kamoun, F., & Basel Almourad, M. (2014). Accessibility as an integral factor in e-government web site evaluation: The case of Dubai e-government. *Information Technology & People*, *27*(2), 208-228.

Kaplan, B., & Maxwell, J. A. (2005). Qualitative research methods for evaluating computer information systems. In *Evaluating the organizational impact of healthcare information systems* (pp. 30-55). New York, NY: Springer.

Kirkman, G. (2000). It's More than Just Being Connected. In *A Discussion of Some Issues of Information Technology and International Development. Development ECommerce Workshop. The Media Laboratory at the Massachusetts Institute of Technology. Cambridge, Massachusetts*.

Kleine, D. (2011). The capability approach and the 'medium of choice': Steps towards conceptualising information and communication technologies for development. *Ethics and Information Technology*, *13*(2), 119-130.

Kotelnikov, V. (2014). *Small and Medium Enterprises and ICT*. Retrieved from http://www.unapcict.org/ecohub/resources/small-and-medium-enterprises-and-ict/at_download/attachment1

Krathwohl, D. R. (1993). *Methods of educational and social science research: An integrated approach*. New York, NY: Longman Publishing.

Kyem, P. A. (2016). Mobile Phone Expansion and Opportunities for e-Governance in Africa. *The Electronic Journal of Information Systems in Developing Countries, 75*(6), 1-15.

Kyobe, M. (2009). Factors Influencing SME Compliance with Government on Use of IT. *Journal of Global Information Management, 17*(2), 30-59.

Liedholm, C. E., & Mead, D. C. (2013). *Small enterprises and economic development: The dynamics of micro and small enterprises.* London, UK: Routledge.

Lin, F., Fofanah, S. S., & Liang, D. (2011). Assessing citizen adoption of e-Government initiatives in Gambia: A validation of the technology acceptance model in information systems success. *Government Information Quarterly*, *28*(2), 271-279.

Lincoln, Y. S., Lynham, S. A., & Guba, E. G. (2011). *Paradigmatic controversies, contradictions, and emerging confluences*. London, UK: Sage Publications.

Lokanathan, S., & Kapugama, N. (2012). Smallholders and Micro-enterprises in Agriculture: Information needs and communication patterns. *The Social Science Research Network,* 1-53.

Luiz, J. (2002). Small business development, entrepreneurship and expanding the business sector in a developing economy: The case of South Africa. *The Journal of Applied Business Research, 18*(2), 53-69.

Mack, N., Woodsong, C., MacQueen, K.M. & Namey, E. (2005). *Qualitative research methods: A collector's field guide*. *Family Health International*. Retrieved from http://fhi.org/NR/rdonlyres/emgox4xpcoyrysqspsgy5ww6mq7v4e44etd6toiejyxalhbmk5sdnef7fqlr3q6hlwa2ttj5524xbn/datacollectorguideenrh.pdf

Madill, A., Jordan, A., & Shirley, C. (2000). Objectivity and reliability in qualitative analysis: Realist, contextualist and radical constructionist epistemologies. *British Journal of Psychology*, *91*(1), 1-20.

Macueve, G. A. (2008). *Analyzing challenges and opportunities of the implementation of e-government initiatives for development through the lens of the capability approach: case studies from Mozambique* (Doctoral dissertation, University of Oslo Norway).

Mai, J. E. (2016). *Looking for information: A survey of research on information seeking, needs, and behavior*. Bingley, UK: Emerald Group Publishing.

Makoza, F. (2011). *The impact of ICT use on livelihoods of microenterprises: Case of South Africa* (Masters dissertation, University of Cape Town).

Makoza, F., & Chigona, W. (2013). Accessibility of E-Government Websites: Case of Malawi. In *Proceedings of the 15th Annual Conference on World Wide Web Applications* (pp. 10-13). Cape Town, South Africa.

Makoza, F., & Chigona, W. (2014). Interaction Patterns and ICT Use to Support the Livelihoods of Microenterprises. *International Journal of ICT Research and Development in Africa (IJICTRDA), 4*(1), 20-40.

Makoza, F., & Chigona, W. (2012). The livelihood outcomes of ICT use in microenterprises: The case for South Africa. *The Electronic Journal on Information Systems in Developing Countries, 53*(1), 1-16.

Malik, B. H., Shuqin, C., Mastoi, A. G., Gul, N., & Gul, H. (2016). Evaluating Citizen e-Satisfaction from e-Government Services: A Case of Pakistan. *European Scientific Journal*, *12*(5), 346-370.

Masakure, O., Henson, S., & Cranfield, J. (2009). Performance of microenterprises in Ghana: A resource-based view. *Journal of Small Business and Enterprise Development, 16*(3), 466-484.

Matavire, R., Chigona, W., Roode, D., Sewchurran, E., Davids, Z., Mukudu, A., & Boamah-Abu, C. (2010). Challenges of eGovernment project implementation in a South African context. *The Electronic Journal Information Systems Evaluation, 13*(2), 153-164.

Mawela, T., Ochara, N. M., & Twinomurinzi, H. (2016). E-Government Implementation: Lessons from South African Municipalities. In *Proceedings of the Annual Conference of the South African Institute of Computer Scientists and Information Technologists* (p. 23). ACM.

Mbuyisa, B., & Leonard, A. (2017). The Role of ICT Use in SMEs Towards Poverty Reduction: A Systematic Literature Review. *Journal of International Development*, *29*(2), 159-197.

McNabb, D. (2002). *Research Methods in Public Administration and non-profit Management: Quantitative and Qualitative Approaches*. New York, NY: Armonk.

Mitrovic, Z., & Bytheway, A. (2009). Awareness of e-Government related Small Business development services in Cape Town. *The Electronic Journal of Information Systems in Developing Countries*, *39*(4), 1-14.

Monyepao, M. D., & Weeks, R. V. (2012). Case study: Assessing and evaluating the readiness of the ICT infrastructure to provide e-government services at a local government level in South Africa. In *Technology Management for Emerging Technologies (PICMET), 2012 Proceedings of PICMET'12:* (pp. 2778-2784). IEEE.

Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, *1*(2), 13-22.

Mpofu, K. C., Milne, D., & Watkins-Mathys, L. (2013). *ICT adoption and development of e-business among SMEs in South Africa.*

Mshenga, P. M., & Richardson, R. B. (2013). Micro and small enterprise participation in tourism in coastal Kenya. *Small business economics*, *41*(3), 667-681.

Mugo, A. (2012). Connecting communities in arid lands with knowledge in East Africa. *Knowledge Management for Development Journal*, *8*(1), 48-58.

Mutula, S. M. (2013). E-government divide: Implications for sub-Saharan Africa. *Information ethics for Africa: Cross-cutting themes*, 59-69.

Mutula, S. M., & Mostert, J. (2011). Challenges and opportunities of e-government in South Africa. *The Electronic Library, 28*(1), 38-53.

Mutula, S. M., & van Brakel, P. (2006). E-readiness of SMEs in the ICT sector in Botswana with respect to information access. *The Electronic Journal Library, 24*(3), 402-417.

Myers, M. D. (2013). *Qualitative research in business and management*. London, UK: Sage Publications.

Myers, M. D., & Newman, M. (2007). The qualitative interview in IS research: Examining the craft. *Information and Organization*, *17*(1), 2-26.

National Small Business Amendment Bill (2003). *Republic of South Africa: Minister of Trade and Industry.* Government Gazette. ISBN 062133889.

Ndung'u, M. N. & Waema, T. (2011). Development outcomes of internet and mobile phones use in Kenya: The households' perspective. *Info, 13*(3), 110-124.

Noor, K. B. M. (2008). Case study: A strategic research methodology. *American Journal of Applied Sciences*, *5*(11), 1602-1604.

Nussbaum, M. (2009). Capabilities as fundamental entitlements: Sen and social justice. *From employability towards capability*, *4*, 15.

Nussbaum, M., & Sen, A. (1993). *The quality of life*. London, UK: Oxford University Press.

Nkwe, N. (2012). E-government: Challenges and opportunities in Botswana. *International Journal of Humanities and Social Science*, *2*(17), 39-48.

Nyemba-Mudenda, M. E. (2015). *A pathway through which Mhealth outcomes are produced for maternal healthcare consumers in a developing country context* (Doctoral dissertation, University of Cape Town).

Odat, A. M. (2012). E-government in developing countries: Framework of challenges and opportunities. In *Internet Technology and Secured Transactions, 2012 International Conference for* (pp. 578-582). IEEE.

Olatokun, W. M. (2017). Availability, accessibility and use of ICTs by Nigerian women academics. *Malaysian Journal of Library & Information Science*, *12*(2), 13-33.

Ongori, H., & Migiro, S. O. (2010). Information and communication technologies adoption in SMEs: Literature review. *Journal of Chinese Entrepreneurship*, *2*(1), 93-104.

Osotimehin, K. O., Jegede, C. A., Akinlabi, B. H., & Olajide, O. T. (2012). An evaluation of the challenges and prospects of micro and small scale enterprises development in Nigeria. *American International Journal of Contemporary Research*, *2*(4), 174-185.

Parkinson, S., & Ramirez, R. (2006). Using a Sustainable Livelihoods Approach to assessing the impact of ICTs in Development. *Journal of Community Informatics*, *2*(3), 1-14.

Patton, M. Q. (2015). *Qualitative Research & Evaluation Methods: Integrating Theory and Practice (4th ed.)*. London, UK: Sage Publications.

Pillay, K. N. (2013). *e-Government in South Africa: Predictors to failure and success* (Doctoral dissertation, University of Witwatersrand).

Pokwana, U., & Kyobe, M. (2013). Factors influencing e-government implementation at provincial level: The perceptions of managers in the Western Cape Province of South Africa. In *Proceedings of the Annual Conference on World Wide Web Applications (pp. 1-17).* Cape Town, South Africa.

Ponelis, S. (2014). Information Needs, Information Seeking Behaviour and Use of ICT in Knowledge-based South African Growth SMMEs. In *15th Annual IS Conference*.

Praditya, D., & Janssen, M. (2015). Benefits and Challenges in Information Sharing Between the Public and Private Sectors. In *Proceedings of the 15th European Conference on eGovernment 2015: ECEG 2015* (p. 246). Academic Conferences Limited.

Provincial Strategic Plan. (2015). Retrieved from https://www.westerncape.gov.za/text/2015/October/western_cape_provincial_strategic_plan_2014-2019.pdf

Qureshi, S. (2016). Discovering Development outcomes from ICT interventions in a set of micro-enterprises operating in low resource environments. *GlobDev 2016*.

Qureshi, S., Kamal, M., & Good, T. (2008). Adoption of Information Technology by Micro-enterprises: Insights from a rural community. *AMCIS 2008 Proceedings*, 335.

Qureshi, S., Kamal, M., & Wolcott, P. (2010). Information technology interventions for growth and competitiveness in micro-enterprises. *Global perspectives on small and medium enterprises and strategic information systems: International approaches*, 306-329.

Rashid, A. T., & Elder, L. (2009). Mobile phones and development: An analysis of IDRC-supported projects. *The Electronic Journal of Information Systems in Developing Countries*, *36*(2), 1-16.

Reddick, C. G., & Roy, J. (2013). Business perceptions and satisfaction with e-government: Findings from a Canadian survey. *Government Information Quarterly, 30*(1), 1-9.

Robeyns, I. (2005a). Selecting capabilities for quality of life measurement. *Social Indicators Research, 74*(1), 191-215.

Robeyns, I. (2003). The capability approach: An interdisciplinary introduction. In *Training course preceding the Third International Conference on the Capability Approach, Pavia, Italy*.

Robeyns, I. (2005b). The capability approach: A theoretical survey. *Journal of Human Development, 6*(1), 93-114.

Robeyns, I. (2006). The capability approach in practice. *Journal of Political Philosophy*, *14*(3), 351-376.

Robson, C., & McCartan, K. (2016). *Real world research*. New York, NY: John Wiley & Sons.

Rorissa, A., & Demissie, D. (2010). An analysis of African e-Government service websites. *Government Information Quarterly*, *27*(2), 161–169.

Rubin, H. J., & Rubin, I. S. (2011). *Qualitative interviewing: The art of hearing data*. London, UK: Sage Publications.

Samuel, J., Shah, N., & Hadingham, W. (2005). Mobile communications in South Africa, Tanzania and Egypt: Results from community and business surveys. *The Vodafone Policy Paper Series, 2*(3), 44-52.

Sarantakos, S. (2012). *Social research*. New York, NY: Palgrave Macmillan.

Saunders, M. N. (2011). *Research methods for business students*. Delhi, DL: Pearson Education.

Sathye, M., Prasad, B. C., Sharma, D., Sharma, P., & Sathye, S. (2014). *Mobile Value Added Services and Micro Enterprises: Industry Challenges and Policy Barriers in a Small Pacific Island Country*.

Schofield, J. W. (2002). Increasing the generalizability of qualitative research. *The Qualitative Researcher's Companion*, 171-203.

Schurink, E. M. (2001). *Deciding to Use a Qualitative Research Approach*. Pretoria, SA: van Schaik Publishers.

Schwandt, T. A. (1994). Constructivist, interpretivist approaches to human inquiry. *Handbook of Qualitative Research, 1*(2), 118-137.

Schwandt, T. A. (2000). Three epistemological stances for qualitative inquiry. *Handbook of Qualitative Research*, *2*(2), 189-213.

Small Enterprise Development Agency. (2014). *Annual Review of Small Business in South Africa 2013/2014*. Retrieved from https://www.thedti.gov.za/parliament/2014/SEDA_AR2014.pdf

Sekaran, U. (2003). *Research methods for business: A skill-building approach*. New York, NY: John Wiley & Sons.

Sekaran, U., & Bougie, R. (2011). *Research method for business: A skill building approach*. New York, NY: John Wiley & Sons.

Sen, A. (1993). *Capability and well-being. In Nussbaum, M., & Sen, A. (Eds.). The quality of life*. Oxford, UK: Blackwell Publishing.

Shambour, Q. Y. (2012). *Hybrid recommender systems for personalized government-to-business e-services* (Doctoral dissertation, University of Technology, Sydney).

Siebritz. A. (2015). *Domestication of Free Municipal Wi-Fi amongst People Living in Disadvantaged Communities: Case of Cape Town*. University of Cape Town.

South Africa Budget Speech. (2011). *South Africa 2011 Budget Speech*. Retrieved from http://www.nda.agric.za/docs/speeches/BudgetSpeech2011.pdf

Speckman, A. (2016). *Exclude SMMEs from collective bargaining to create more jobs — IMF.* Retrieved from http://www.bdlive.co.za/economy/2016/07/19/exclude-smmes-from-collective-bargaining-to-create-more-jobs--imf

State of the Province Address. (2014). Retrieved from https://www.westerncape.gov.za/gc-news/97/29719

Statistics South Africa. (2016a). *Employment, Economy, and Foreign Income*. Retrieved from http://www.statssa.gov.za/?p=6166

Statistics South Africa. (2016b). *Quarterly Labour Force Survey.* Retrieved from http://www.statssa.gov.za/publications/P0211/P02114thQuarter2016.pdf

Statistics South Africa. (2014c). *General Household Survey (GHS) 2014 Report*. Retrieved from http://www.statssa.gov.za/publications/P0318/P03182014.pdf

Steyn, E., Steyn, A. A., & De Villiers, C. (2014). Perceptions of mobile ICT adoption by South Africa micro entrepreneurs. In *e-Skills for Knowledge Production and Innovation Conference*.

Stillman, L., & Denison, T. (2014). The capability approach community informatics. *The Information Society, 30*(3), 200-211.

Strydom, H., & De Vos, A. S. (2001). *Sampling and Sampling Methods*. Pretoria, SA: van Schaik Publishers.

Svensson, L. (1984). *Three Approaches to Descriptive Research. Education Resources Information Center*. London, UK: McGraw-Hill.

Swanepoel, E., Strydom, J., & Nieuwenhuizen, C. (2010). An empirical analysis of a private company's corporate social investment in SMME development in South Africa. *Southern African Business Review, 14*(1), 58-78.

Tabane, O. J.J. (2016). *Zulu needs a new rhetoric to get big business on board*. Retrieved from http://www.bdlive.co.za/opinion/columnists/2016/01/05/zulu-needs-a-new-rhetoric-to-get-big-business-on-board

Tanle, A., & Abane, A. M. (2017). Mobile phone use and livelihoods: qualitative evidence from some rural and urban areas in Ghana. *GeoJournal*, 1-11.

Tanner, M. C., & du Toit, A. (2015). The Influence of Higher Education Stakeholders on the Sustainability of ICT4D Initiatives in Underserved Communities. *The Electronic Journal of Information Systems in Developing Countries, 71*(7), 1-16.

Tashtoush, Y. M., Ala'F, D., & Al-Sarhan, H. N. (2016). The Arabian e-government websites accessibility: A case study. In *Information and Communication Systems (ICICS), 2016 7th International Conference on* (pp. 276-281). IEEE.

The Local Government Handbook. (2016). *Western Cape*. Retrieved from http://www.localgovernment.co.za/provinces/view/9/western-cape

The World Bank. (2011). *Accountability in Public Services in South Africa: The World Bank*. Retrieved from http://siteresources.worldbank.org/INTSOUTHAFRICA/Resources/Accountability_in_Public_Services_in_Africa.pdf

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation, 27*(2), 237-246.

Tshandu, Z., & Kariuki, S. (2010). Public administration and service delivery reforms: A post-1994 South African case. *South African Journal of International Affairs*, *17*(2), 189-208.

Twinomurinzi, H., & Visser, W. (2009). *E-Government & Public Service Delivery: Enabling ICT to put "People First" – A Case Study from South Africa*.

United Nations e-Government Survey. (2010). Retrieved from https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2010

United Nations e-Government Survey. (2012). Retrieved from https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2012

United Nations e-Government Survey. (2014). Retrieved from https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2014

United Nations e-Government Survey. (2016). Retrieved from https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2016

Valentine, S. (2004). E-Powering the People: South Africa's Smart Cape Access Project. *Council on Library and Information Resources*.

van Biljon, J., Renaud, K., & van Dyk, T. (2013). Reporting on Accessibility Challenges Experienced by South Africa's Older Mobile Phone Users. *The Journal of Community Informatics*, *9*(4), 1-30.

Velaga, N. R., Beecroft, M., Nelson, J. D., Corsar, D., & Edwards, P. (2012). Transport poverty meets the digital divide: Accessibility and connectivity in rural communities. *Journal of Transport Geography*, *21*, 102-112.

Venkatesh, V., Brown, S. A., & Bala, H. (2013). Bridging the qualitative-quantitative divide: Guidelines for conducting mixed methods research in information systems. *MIS Quarterly*, *37*(1), 21-54.

Vosloo, S., & Van Belle, J. P. (2005). E-government and the E-readiness of Non-Profit Organisations in the Western Cape. In *proceedings of the 2nd Annual Conference of the Community Informatics Research Network* (pp. 398-407). Cape Town, South Africa.

Walton, M., & Donner, J. (2012). *Public access, private mobile: The interplay of shared access and the mobile Internet for teenagers in Cape Town*. IDRC.

Wehrs, W. E. (1992). Using an expert system to support academic advising. *Journal of Research on Computing in Education*, *24*(4), 545-562.

Western Cape Government. (2018a). *Small Business*. Retrieved from https://www.westerncape.gov.za/topics/1318

Western Cape Government. (2018b). *Western Cape Government: Overview*. Retrieved from https://www.westerncape.gov.za/your_gov/70

Western Cape Government. (2018c). *Department of Economic Development and Tourism: About Us.* Retrieved from https://www.westerncape.gov.za/dept/edat/about

Western Cape Government. (2017d). *WCG Digital Government Strategy*. Retrieved from https://www.dtps.gov.za/index.php?option=com_phocadownload&view=category&download=558:western-cape_blueprint-2-0-presentation-dtps-workshop-23-may-2017&id=105:e-strategy&Itemid=106

Wesgro. (2012). *Western Cape: Destination Fact Sheet*. Retrieved from https://www.westerncape.gov.za/assets/departments/premier/2012.06_western_cape_overview1_0.pdf

Whittemore, R., Chase, S. K., & Mandle, C. L. (2001). Validity in qualitative research. *Qualitative Health Research*, *11*(4), 522-537.

Williams, C. C., Martinez-Perez, A., & Kedir, A. M. (2017). Informal entrepreneurship in developing economies: The impacts of starting up unregistered on firm performance. *Entrepreneurship Theory and Practice*, *41*(5), 773-799.

Woodward, D., Rolfe, R., Ligthelm, A., & Guimaraes, P. (2011). The viability of informal microenterprise in South Africa. *Journal of Developmental Entrepreneurship*, *16*(1), 65-86.

Wolcott, P., Kamal, M., & Qureshi, S. (2008). Meeting the challenges of ICT adoption by microenterprises. *Journal of Enterprise Information Management, 21*(6), 616-632.

Yildiz, M. (2007). 'e-Government research: Reviewing the literature, limitations and ways forward'. *Government Information Quarterly, 24*(3), 646-65.

Yin, R. K. (2013). *Case Study Research: Design and Methods*. London, UK: Sage Publications.

Zaidi, S. F. H., & Qteishat, M. K. (2012). Assessing e-government service delivery (government to citizen). *International Journal of eBussiness and eGovernment Studies*, *4*(1), 45-54.

Zhao, F., Collier, A., & Deng, H. (2014). A multidimensional and integrative approach to study global digital divide and e-government development. *Information Technology & People*, *27*(1), 38-62.

Zheng, Y. (2009). Different spaces for e-development: What can we learn from the capability approach?. *Information Technology for Development*, *15*(2), 66-82.

Zheng, Y., & Walsham, G. (2008). Inequality of what? Social exclusion in the e-Society as capability deprivation. *Information Technology and People, 21*(3), 222-243.

Zimmermann, B. (2006). Pragmatism and the Capability Approach Challenges in Social Theory and Empirical Research. *European Journal of Social Theory*, *9*(4), 467-484.

Appendices

I. Appendix A: E-Government Development Index

For more than ten years the United Nations has assessed the worldwide development of e-Government through the initiative "Benchmarking E-government: Assessing the United Nations Member States" (United Nations e-Government Survey, 2010). Since 2001, there has been growing evidence through public policy formulation and implementation that e-Government, among others, has served as an effective enabling role in advancing national development (United Nations e-Government Survey, 2012). The conceptual framework used by the United Nations is the E-Government Development Index (EGDI) (United Nations e-Government Survey, 2010). The framework is a composite measure of three main aspects of e-Government such as the provision of online services, telecommunication connectivity and human capacity (United Nations e-Government Survey, 2010). Currently, South Africa is ranked third in Africa and 76th globally (United Nations e-Government Survey, 2016). Table A lists the top ten countries for e-Government in Africa with high to medium EGDI.

Table A: Top ten countries for e-Government in Africa (United Nations e-Government Survey, 2016).

Top 10 countries for e-government in Africa

Country	Region	Sub-Region	OSI	HCI	TII	EGDI	EGDI Level	2016 Rank
Mauritius	Africa	Eastern Africa	0.7029	0.7067	0.4596	0.6231	High	58
Tunisia	Africa	Northern Africa	0.7174	0.6397	0.3476	0.5682	High	72
South Africa	Africa	Southern Africa	0.5580	0.7253	0.3807	0.5546	High	76
Morocco	Africa	Northern Africa	0.7391	0.4737	0.3429	0.5186	High	85
Seychelles	Africa	Eastern Africa	0.4058	0.6861	0.4624	0.5181	High	86
Cape Verde	Africa	West Africa	0.4565	0.6031	0.3629	0.4742	Medium	103
Egypt	Africa	Northern Africa	0.4710	0.6048	0.3025	0.4594	Medium	108
Botswana	Africa	Southern Africa	0.2826	0.6553	0.4215	0.4531	Medium	113
Libyan Arab Jamahiriya	Africa	Northern Africa	0.1087	0.7588	0.4291	0.4322	Medium	118
Kenya	Africa	Eastern Africa	0.5580	0.5169	0.1808	0.4186	Medium	119

The above trend indicates that more countries are progressing towards higher levels of e-government. Countries are responding to citizen's increasingly diverse and complex requirements and the need for better and faster public services (United Nations e-Government Survey, 2016). There is also growing recognition of e-Government to support sustainable development in the three dimensions – economic growth, social inclusion and environmental protection (United Nations e-Government Survey, 2014). Therefore,

countries that have a high-EGDI such as South Africa have a significant opportunity to improve and advance their development of e-Government (United Nations e-Government Survey, 2012).

II. Appendix B: Project Plan

No.	Task Description	Duration	Date of Completion	Milestone
1.	Research proposal presentation	5 weeks	24 March	Research proposa draft
2.	Research proposal	6 weeks	28 April 2016	Research proposa
3.	Literature review	9 weeks	25 July 2016	Literature review design
4.	Research design presentation	5 weeks	9 September 2016	Research design draft
5.	Research design	6 weeks	31 October 2016	Research design document
6.	Research ethics approval	N/A	14 February 2017	Research ethics approved
7.	Pre-test research instrument	3 weeks	7 March 2017	Interview transcripts
8.	Data collection	3 weeks	25 March 2017	Interview transcripts
9.	Data analysis	4 weeks	27 April 2017	Analysis report
10.	Triangulation	1 week	11 May 2017	Triangulated findings
11.	Write research findings	8 weeks	31 July 2017	Research findings
12.	Write discussion and conclusion	4 weeks	31 August	Discussion and conclusion
13.	Prepare draft dissertation	8 weeks	31 October 2017	Prepare draft report
14.	Submit draft dissertation	N/A	8 December 2017	Submit draft repor
15.	Revise draft dissertation	2 weeks	14 January 2018	Revise draft repor
16.	Submit final dissertation	1 week	21 January 2018	Final report

III. Appendix C: Authorisation to Conduct Research

WESTERN CAPE RESEARCH

To Whom It May Concern,

As you may be aware, the Western Cape Government has recognised the importance and contribution of Broadband in the development of its citizen's, the economy and government service delivery. The Western Cape Government has therefore developed a Broadband strategic framework and implementation plan to improve the quality and reduce the costs of Broadband in order to realise the vision of "a Western Cape where every citizen in every town and village has access to affordable high speed broadband infrastructure and services, has the necessary skills to be able to effectively utilise the infrastructure and is actively utilising this in their day to day lives to improve productivity and access to new markets."

As part of the collaboration between the Western Cape Government and the Cape Higher Education Consortium (CHEC), the Department of Economic Development and Tourism (DEDAT) is supporting research that is being conducted by the UCT Department of Information Systems. The key outcome of the project is to support the growth of entrepreneurship in the Western Cape.

We would therefore appreciate if you would be able to make available the necessary time, information and feedback as required. The researchers will provide relevant letters to uphold confidentiality of any sensitive information.

Should you have any queries relating to this matter, please do not hesitate to contact Mr Marc Cloete from DEDAT on 021 483 9243 or email: Marc.Cloete@westerncape.gov.za

Yours sincerely

MARC CLOETE
DEPUTY DIRECTOR: BROADBAND INITIATIVE
DEPARTMENT OF ECONOMIC DEVELOPMENT AND TOURISM

12 05 2016
DATE:

www.westerncape.gov.za

IV. Appendix D: Interview Consent Form

Department of Information Systems

Leslie Commerce Building

Engineering Mall, Upper Campus

Private Bag X3 - Rondebosch - 7701

Tel: +27 (0) 21 650 2261 Fax: +27 (0) 21650 2280

Internet: http://www.commerce.uct.ac.za/informationsystems/

Request to conduct research and interview participation consent form

Dear Sir/Madam,

In terms of the requirements for completing a Master of Commerce Degree in Information Systems at the University of Cape Town, a research study is required.

I, Muhammad Ameer Osman, am conducting a study entitled "*Challenges micro-enterprises experience in accessing support information using e-Government websites: Case of the Western Cape*". I would like to request permission to conduct this study at your business or a place convenient to you. The main objective of the research is to investigate the challenges that micro-enterprises experience in accessing support information using e-Government websites.

This research has been approved by the Commerce Faculty Ethics in Research Committee. Your participation in this research is voluntary. All information will be treated in a confidential manner and used exclusively for the purpose of this study. No individual names will be recorded or published. You will not be requested to supply any identifiable information, ensuring anonymity of your responses. You can choose to withdraw from the research at any time for whatever reason, in accordance with ethical research requirements.

The data collection method will be one-on-one interviews with the owner of the micro-enterprise. The interviews will be conducted at your business or a place convenient to you and will last for about 60 minutes. If you are willing to participate in this study, kindly sign the attached form.

Should you have any questions regarding this research, please feel free to contact me on 078-336-9061 or email: osmmmuh013@myuct.ac.za

Your participation in this study would be greatly appreciated, but is voluntary.

Sincerely,

Muhammad Ameer Osman

Researcher \ M. Com Student
Department of Information Systems
University of Cape Town
Email: osmmuh013@myuct.ac.za

Professor Wallace Chigona

Research Supervisor
Department of Information Systems
University of Cape Town
Email: wallace.chigona@uct.ac.za

Research Participant Consent Form

I, _____, consent to participate in the research on "*Challenges micro-enterprises experience in accessing support information using e-Government websites: Case of the Western Cape*".

I am aware that participation is voluntary and that I may choose to withdraw from this study at any time, should I choose to do so.

_____ _____

Signature Date

V. Appendix E: Research Instrument

Opening

1. What are your business goals, which you aim to achieve?

List of capabilities (potential functionings)

2. What are the potential opportunities of using technology for your business?
3. What are the potential opportunities of accessing support information for your business?

Conversion factors for generating a capability set

4. How do you access technology for your business (internal or shared ICT facilities)?
5. Which ICT devices do you use for your business?
6. Have you received computer training on how to use the ICT devices?
7. What type of websites do you use to access support information?
8. What types of support information have you attempted to access or accessed?

Conversion factors affecting the outcome

9. How competently can you use the ICT devices for your business?
10. What challenges do you experience in accessing support information for your business?

Outcome of ICT commodity (achieved functionings)

11. How has technology enabled you to achieve your business goals?

Outcome of e-Government commodity (potential achieved functionings)

12. How would access to support information enable you to achieve your business goals?

Agency and well-being

13. How would access to support information enable you to achieve your personal goals?

VI. Appendix F: Interview Procedure

Interviews Procedure
A. Preparations
1. Study the interview guide and consent form.
2. Confirm date, time and venue for the interview.
3. Check recording equipment and note making materials.
4. Arrive early at the venue of the interview.
B. Conducting Interviews
1. Greet the participants and introduce yourself in a friendly manner.
2. Describe the interview process briefly.
3. Obtain the informed consent from the participant.
4. Switch on the recording equipment if permission to use the recorder is granted.
5. Verify consent on recorder.
6. Ask the questions according to the interview guide and ask follow up questions.
7. At the end of the questions give the participant the opportunity to ask questions.
8. Summarise key points and verify with participant.
9. Thank the participant for their time and switch off the recorder.
C. Post Interview
1. Check if the interview is recorded, if not recorded expand the notes.
2. Debrief the interview participants.
3. Assemble all materials.
4. Expand the notes within 24 hours.

VII. Appendix G: Ethics Application Form

UNIVERSITY OF CAPE TOWN

FACULTY OF COMMERCE

Igniting Knowledge and Opportunity

Any person planning to undertake research in the Faculty of Commerce at the University of Cape Town is required to complete this form **before collecting or analysing data**. If any of the questions below have been answered YES, and the applicant is NOT an Honours student, the form it should be submitted to the supervisor (where applicable) and from there for approval by the Faculty EIR committee: Ms Samantha Alexander (**samantha.alexander@uct.ac.za).**

It is assumed that the researcher has read the UCT Code for Research involving Human Subjects (Available at http://web.uct.ac.za/depts/educate/download/uctcodeforresearchinvolvinghumansubjects.pdf) in order to be able to answer the questions in this form.

Students must include a copy of the completed form with the dissertation/thesis when it is submitted for examination.

1. PROJECT DETAILS			
Project title:	Challenges micro-enterprises experience in accessing support information using e-Government websites: Case of the Western Cape		
Principal Researcher/s:	Muhammad Ameer Osman	**Email address(es):**	osmmuh013@myuct.ac.za
Research Supervisor:	Professor Wallace Chigona	**Email address(es):**	wallace.chigona@uct.ac.za
Co-researcher(s):	N/A	**Email address(es):**	N/A
Department: Information Systems			

Micro-enterprises contribute significantly toward the socio-economic development of numerous developing countries (Osotimehin et al., 2012). The role of micro-enterprises in an economy usually includes income generation, a source of employment and self-empowerment (Makoza & Chigona, 2014). Micro-enterprises are particularly important because they have the capacity to assist the most vulnerable members of a society by improving social conditions (Makoza & Chigona, 2012). However, the majority of micro-enterprises find it challenging to survive or to grow due to numerous challenges they experience such as access to information, securing capital, limited business skills, identifying markets and understanding the regulatory requirements for a business (Osotimehin et al., 2012). These challenges usually lead to micro-enterprises not surviving beyond the first two years (Makoza & Chigona, 2014). Information and Communication Technologies (ICTs) could assist micro-enterprises to improve their chances of survival, grow and continue to be competitive (Qureshi et al., 2008).

Governments internationally are using ICTs to improve the delivery of public services, include stakeholders in decision-making processes, decrease administrative expenses and eliminate bureaucracy such as red tape ((Bal, Biricik & Sari, 2015)). E-Government has been internationally advocated to improve the delivery of government information and efficiency, while at the same time improving accountability, clarity, responsiveness and placing governments closer to its citizens (Zhao & Collier, 2014). However, African governments are experiencing challenges that limit the success of e-Government such as insufficient expertise, resources, implementation plans and infrastructure (Makoza & Chigona, 2013). Additional challenges include socio-economic conditions, lack of appropriate content, language barriers and literacy levels (Grönlund, 2011). These challenges have resulted in an inability to implement e-Government and citizens are unable to use e-Government services (Lin et al., 2011). Consequently, many e-Government projects result in failure, however, African governments continue to invest in e-Government projects to provide public services online (Bwalya & Healy, 2010). This has resulted in challenges of accessibility; and has created a need for research into the phenomenon of e-Government accessibility in developing countries, specifically Africa (Agangiba & Kabanda, 2016; Odat, 2012).However, African governments are experiencing issues that limit the success of e-Government such as insufficient expertise, resources, implementation plans and infrastructure (Makoza & Chigona, 2013). Additional issues include socio-economic conditions, lack of appropriate content, language barriers and literacy levels (Grönlund, 2011). These issues have resulted in an inability to implement e-Government and citizens are unable to use e-Government services (Lin et al., 2011). Consequently, many e-Government projects result in failure; however, African governments continue to invest in e-Government projects to provide public services online (Bwalya & Healy, 2010; Pokwana & Kyobe, 2013). This has resulted in issues of accessibility occurring; and has created a need for researchers to investigate the phenomenon of e-Government accessibility in developing countries, specifically Africa (Agangiba & Kabanda, 2016; Odat, 2012).

Data collection: (please select)

☒Interviews ☐Questionnaire ☐Experiment ☒Secondary data ☐Observation

☐ Other (please specify): _____

Have you attached a research proposal OR a literature review with research methodology? (please select) ☒Yes ☐No

2. PARTICIPANTS

2.1 Does the research discriminate against participation by individuals, or differentiate between participants, on the grounds of gender, race or ethnic group, age range, religion, income, handicap, illness or any similar classification?		NO
2.2 Does the research require the participation of socially or physically vulnerable people (children, aged, disabled, etc.) or legally restricted groups?		NO
2.3 Will you be able to secure the informed consent of all participants in the research? (In the case of children, will you be able to obtain the consent of their guardians or parents?)	YES	
2.4 Will any confidential data be collected or will identifiable records of individuals be kept?		NO
2.5 In reporting on this research is there any possibility that you will not be able to keep the identities of the individuals involved anonymous?		NO
2.6 Are there any foreseeable risks of physical, psychological or social harm to participants that might occur in the course of the research?		NO
2.7 Does the research include making payments or giving gifts to any participants?		NO

If you have answered **YES to any of these questions**, please describe how you plan to address these issues (append to form):

Affiliations of participants: (please select)

☐Company employees ☐Hospital employees ☒General public ☐Military staff ☐Farm workers ☐Students

☐ Other (please specify): _____

Race / Ethnicity:

Are you asking a question about race/ethnicity in your questionnaire?

☐ Yes ☒No

Which race categories have been used?

Have you included the option: "Prefer not to answer" as part of your race/ethnicity question?

3. PROVISION OF SERVICES

Does your research involve the participation of or provision of services to communities?
If your answer is YES, please complete below:

3.1 Is the community expected to make decisions for, during or based on the research?	N/A	N/A
3.2 At the end of the research will any economic or social process be terminated or left unsupported, or equipment or facilities used in the research be recovered from the participants or community?	N/A	N/A
3.3 Will any service be provided at a level below the generally accepted standards?	N/A	N/A

If you answered YES to any of these questions, please describe below how you plan to address these issues.

3. ORGANISATIONAL PERMISSION

If your research is being conducted within a specific organisation, please state how organisational permission has been/will be obtained:

The project was supported by the Western Cape Government's Department of Economic Development and Tourism (DEDAT). DEDAT has authorised the research being conducted by the UCT Department of Information Systems. Furthermore, an authorisation letter is attached in the thesis as Appendix C: Authorisation to Conduct Research.

Have you attached the letter from the organisation granting permission? (please select)

☒ Yes ☐ No, but this **will be** obtained before commencing the research ☐ Not applicable

Are you making use of **UCT students** as respondents for your research? (please select) ☐ Yes ☒ No

If yes, have you contacted Executive Director: Student Affairs for permission? (please select) ☐ Yes ☐ No

Was approval granted? (please select) ☐ Yes ☐ No ☐ Awaiting a response

Are you making use of **UCT staff** as respondents for your research? (please select) ☐ Yes ☒ No

If yes, have you contacted Executive Director: Human Resources for permission? (please select) ☐ Yes ☐ No

Was approval granted? (please select) ☐ Yes ☐ No ☐ Awaiting a response

Contact Emails: Executive Director: Human Resources (**Miriam.Hoosain@uct.ac.za)**
Executive Director: Student Affairs (**Moonira.Khan@uct.ac.za)**

4. INFORMED CONSENT

What type of consent will be obtained from study participants?

- ☐ Oral Consent
- ☑ Written Consent
- ☐ Anonymous survey questionnaire (covering letter required , no consent forms needed)
- ☐ Other (Please Specify)

How and where will consent/permission be recorded?

Permission will be recorded at the micro-enterprise by using a consent form, which the study participants will have to complete before being interviewed. The consent form is attached as Appendix D: Interview Consent Form.

Have you attached an informed consent form to your application? ☒ Yes ☐ No

5. SPONSORSHIP OF RESEARCH

If your research is sponsored, is there any potential for conflicts of interest?
If your answer is YES, please complete below

4.1 Is there any existing or potential conflict of interest between a research sponsor, academic supervisor, other researchers or participants?		NO
4.2 Will the information that reveals the identity of participants be supplied to a research sponsor, other than with the permission of the individuals?		NO
4.3 Does the proposed research potentially conflict with the research of any other individual or group within the University?		NO

If you have answered **YES** to any of these questions, please describe how you plan to address these issues (append to form)

6. RISK TO PARTICIPANTS

Does the proposed research pose any physical, psychological, social, legal, economic, or other risks to study participants you can foresee, both immediate and long range? **(please select)**

☐ Yes ☒No

If yes, answer the following questions:

1. Describe in detail the nature and extent of the risk and provide the rationale for the necessity of such risks
2. Outline any alternative approaches that were or will be considered and why alternatives may not be feasible in the study
3. Outline whether and why you feel that the value of information to be gained outweighs the risks

1.

2.

3.

I certify that I have read the Commerce Faculty Ethics in Research policy (http://www.commerce.uct.ac.za/Pages/ComFac-Downloads**)**	☒

I hereby undertake to carry out my research in such a way that

- there is no apparent legal objection to the nature or the method of research; and
- the research will not compromise staff or students or the other responsibilities of the University;
- the stated objective will be achieved, and the findings will have a high degree of validity;
- limitations and alternative interpretations will be considered;
- the findings could be subject to peer review and publicly available; and
- I will comply with the conventions of copyright and avoid any practice that would constitute plagiarism.

Signed by: Muhammad Ameer Osman

	Full name and signature	Date
Principal Researcher/Student: Muhammad Ameer Osman	Muhammad Ameer Osman 	28/10/2016

This application is approved by:

Supervisor		
HOD (or delegated nominee – for all Honours Projects):		
Chair: Faculty EIR Committee (only for postgraduate research at Master and PhD level)		

CHECKLIST	SELECT
A full copy of a research proposal or a literature review with methodology is attached in a separate file	☒
Interview schedules / cover letters / questionnaires / forms and other materials used in the study are attached in separate files	☒
Organisational consent letter / UCT student or staff approval letter	☒
On your cover letter to your questionnaire, have you included the following? **1. The following UCT Logo** **2. A sentence explaining the aim of the research** **3. Sentences of a similar nature to below must be included in the cover letter or consent form:** **This research has been approved by the Commerce Faculty Ethics in Research Committee.** **Your participation in this research is voluntary. You can choose to withdraw from the research at any time.** **The questionnaire will take approximately 60 minutes to complete.** **You will not be requested to supply any identifiable information, ensuring anonymity of your responses.** **Due to the nature of the study, you will need to provide the researchers with some form of identifiable information however, all responses will be confidential and used for the purposes of this research only.** **Should you have any questions regarding the research please feel free to contact the researcher (insert contact details)?** **4. Have you scanned in your signature for the last section of the form?**	☒ ☒ ☒ ☒ ☒ ☒ **OR** ☒ ☒ ☒

VIII. Appendix H: Ethics Approval Form

Ethics Approval Request for the Study entitled: The challenges micro-enterprises experience in accessing information on e-Government websites: Case of the Western Cape

Signed by:

	Full name and Signature	Date
Principal Researcher/Student:	Muhammad Ameer Osman	14/12/16

This application is approved by:

Supervisor	Wallace Chigona	16 Dec 2016
Co-Supervisor		

Dear Mohammad,
The application has been approved.

Com Ethics_V4